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THE PATROL BOAT NAVY:
AN EMERGENT FORCE IN THE MEDITERRANEAN

Eugene Thomas Oatley

NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

THE PATROL BOAT NAVY:
AN EMERGENT FORCE IN THE MEDITERRANEAN

by

Eugene Thomas Oatley

March 1976

Thesis Advisor:

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The study makes a comparative evaluation of the naval order of battle for nine Middle East and North African States with emphasis on the degree to which reliance on fast patrol craft has been placed. An examination of factors contributing to the development of patrol boat navies is offered with particular attention given to the Arab-Israeli Conflict, Foreign Power Interests, and the move for Arab Independence. Finally, the study serves to illustrate the threat posed by missile-armed patrol craft in emerging navies world-wide.

The Patrol Boat Navy:
An Emergent Force in the Mediterranean

by

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Lieutenant, United States Navy
B.A., Florida State University, 1970

Submitted in partial fulfillment of the
requirements for the degree of

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from the

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March 1976

ABSTRACT

The fifteen year period since 1960 has witnessed a rapid growth in the small navies of the southern and eastern Mediterranean littoral countries. The advent and introduction into the area of the missile-firing fast patrol boat has given a new dimension to the overall balance of forces structure as well as expanding the potential roles of naval units in future hostilities. Additionally, the presence of U.S. and Soviet combatants has created an international arena from which the possibilities of potential conflict have grown alarmingly real.

The study makes a comparative evaluation of the naval order of battle for nine Middle East and North African States with emphasis on the degree to which reliance on fast patrol craft has been placed. An examination of factors contributing to the development of patrol boat navies is offered with particular attention given to the Arab-Israeli Conflict, Foreign Power Interests, and the move for Arab Independence. Finally, the study serves to illustrate the threat posed by missile-armed patrol craft in emerging navies world-wide.

TABLE OF CONTENTS

I.	INTRODUCTION -----	7
	A. THE MEDITERRANEAN AREA -----	10
	B. THE CASE FOR PATROL BOAT NAVIES -----	11
	C. THE STUDY -----	14
II.	THE MEDITERRANEAN -----	16
	A. HISTORICAL OVERVIEW -----	16
	B. STRATEGIC CONSIDERATIONS -----	20
	C. THE PHYSICAL ENVIRONMENT VERSUS NAVAL OPERATIONS -----	30
III.	COMPOSITION OF NAVAL FORCES -----	35
	A. CYPRUS -----	39
	B. SYRIA -----	44
	C. LEBANON -----	48
	D. ISRAEL -----	52
	E. EGYPT -----	59
	F. LIBYA -----	65
	G. TUNISIA -----	69
	H. ALGERIA -----	73
	I. MOROCCO -----	77
	J. OVERALL TRENDS -----	81
IV.	FACTORS WHICH INFLUENCED NAVAL DEVELOPMENT -----	91
	A. ARAB INDEPENDENCE -----	93

B.	THE ARAB-ISRAELI DISPUTE -----	96
C.	FOREIGN POWER INTERESTS -----	102
V.	CONCLUSION -----	108
A.	SUMMARY OF THE STUDY -----	108
B.	IMPLICATIONS FOR THE FUTURE -----	112
	BIBLIOGRAPHY -----	116
	INITIAL DISTRIBUTION LIST -----	119

I. INTRODUCTION

On the twenty-second day of October, 1967, the Israeli destroyer Elath was on war patrol approximately thirteen miles off the Egyptian port of Said. The Elath was a World War II vintage destroyer of 2,500 tons displacement, yet in the hands of her well-trained Israeli crew, she was an effective surface combatant. In fact, some six weeks earlier, the Elath and two torpedo boats had engaged two Egyptian PT boats off the Sinai coast and in a running gunfight, both Egyptian craft were sunk. And now, four months after their disastrous and humiliating defeat, the Egyptians were about to realize a small but significant victory.

In the harbor at Port Said, several small missile-armed Komar patrol boats fired four missiles at the Elath. At a range of about thirteen miles, the first of the missiles was launched and was even observed incoming by the ship's crew. The first missile struck the superstructure, knocking out communications, while the second impacted moments later at the engine room, leaving the Elath dead in the water and on fire. Two more missiles were fired resulting in the eventual capsizing and sinking of the ship. The entire naval world took notice of what may have been the dawning of a new era

of warfare at sea. That a small 75 ton patrol boat could have the impertinence to fire upon a destroyer, the backbone of most of the world's navies, was not only alarming but highly irregular. It is to this incident and the factors relating to what has become the development of patrol boat navies that this paper is concerned.

Although not a new weapon by any means, the fast patrol boat has been adopted as the principal surface combatant by many of the world's smaller navies. Fast, maneuverable, and lethal, it has one more endearing quality: cheap! Depending on size and electronics, a fast patrol boat may cost one-tenth as much as a destroyer, yet have almost comparable fire-power. These craft are essentially a coastal defense weapon, yet, depending upon the circumstances, may have a far greater role.

The Mediterranean Sea, in addition to the obvious factors of strategic significance and political turmoil, lends itself particularly well to the capabilities of patrol craft. A multitude of merchantmen ply the ancient sea routes while super-power rivalry offers direct naval competition at the front doors of the littoral nations. Thus, freedom and control of vital accesses is always a pressing issue, not to mention the protection of the "soft underbelly" of NATO.

Although it may not be within the capability of Morocco, for instance, to attempt a blockade of the Gibraltar Straits with patrol craft, it is however reasonable that she should gain a certain degree of naval credibility in dealing with attempts at certain forms of coercion or "the application for political purposes of limited naval force."¹ As will be discussed further in the study, one of the more realistic uses of patrol boats is in the perceived "clout" offered by a navy of credible capability.

The decade of the sixties saw the small nations of the Mediterranean gradually become more patrol craft oriented. For various reasons, the composition of certain country's navies shows a high degree of reliance on missile-firing craft, and has given them a naval voice of serious content. Not only have the suppliers of military aid to the smaller countries gained political allies, but by the nature of the weapons supplied, may have gained a strategic military advantage. While the U.S.-U.S.S.R. aid programs to the Middle East have sought to maintain some semblance of balance, the Soviets, by supplying missile boats to Algeria and Egypt,

¹Cable, James, Gunboat Diplomacy, p. 21, Praeger Publishers, 1971.

have given themselves a possible future option should the need for a sea denial mission be realized. The act of receiving arms carries with it an implied understanding restricting their use against the supplier, and certainly the Soviet Union would expect this.

A. THE MEDITERRANEAN AREA

This paper will examine nine countries of the Mediterranean littoral proceeding south from Syria including Cyprus, and west across North Africa to Morocco, excluding Jordan. The navies of each country will be examined since 1960 and data will be presented to show the degree to which emphasis on patrol craft has occurred. Several factors will be considered that have influenced the development of patrol boat navies of which the most significant are U.S. and Soviet interests in the area, as well as the technologies which have made missile boats feasible.

The reasons for limiting the study to the countries indicated are logical as well as functional. An analysis of this type requires considerable data handling and care must be taken in choosing appropriate samples from the population. All the subjects considered are comparatively small, are non-NATO, and have had direct interest in the tensions which have gripped the area for so many years. Also, U.S. support

of Israel in contrast to Soviet support of the Arab states offers a natural division for the study. To be sure, the U.S. has supported the countries from Spain east across to Turkey, but the emphasis here was in consideration of NATO interests, 6th Fleet logistics, and countering Soviet moves. While the U.S. mission has been primarily one of strategic offense, the Soviets have been mainly defense motivated in their quest to gain support for their fleet in the Mediterranean.

B. THE CASE FOR PATROL BOAT NAVIES

Despite the overwhelming presence of 6th Fleet and Soviet units in the Mediterranean, there is ample cause to justify the need for a naval voice in an area so dependent upon shipping and so painfully proximate to conflict. As with the Elath incident, there exists sufficient opportunity for continued naval engagement among third world and similar level forces.

Thus, the advent of the surface-to-surface (SSM) anti-shiping missile warrants particular consideration. It is not the intent here to dwell upon the technical aspects of missilery, nor even examine strategies of employment. Rather, by describing the extent to which this element of naval warfare has developed in the Mediterranean, it may bring into

better perspective the implications for future trends.

There exists in other areas of the world great potential for patrol craft utility, the cases of Cuba and Indonesia being prime examples. An interesting phenomena of weapons is that once in possession, there is a tendency toward eventual use. Such can be the case especially with items of high utility as in the example of naval combatants.

Naval craft have innumerable uses, both in peace and conflict. A well-armed cruiser has a striking aura about it and by its mere presence conveys an impression of intent. A patrol boat may not have this image of power in and of itself, in fact, it is this very "unobtrusiveness" that gives these weapons their unique appeal. Whereas an open act of hostility by a major combatant draws concerned attention, the same act by a patrol boat often appears almost self-defensive in nature.

Attacks upon the U.S. destroyer Turner Joy in the Gulf of Tonkin by North Vietnamese craft were hardly considered by many nations as serious acts of aggression, yet the U.S. Navy obviously thought otherwise. The resulting Gulf of Tonkin resolution by the U.S. government which ostensibly legitimized naval action against North Vietnam was openly questioned in many quarters. Nevertheless, patrol craft did, although ineffectively, attack larger warships. In

another case, North Korean patrol boats captured the U.S. intelligence ship Pueblo and again the brunt of disapproval appeared to be directed at the U.S. The issue was more a question of illegal electronic intelligence gathering than piracy on the open seas.

In contrast, the U.S. sent the battleship Missouri in 1946 into the Turkish Straits to signify United State's support of Turkey against Stalin's move to secure control of that strategic waterway. The very presence of so awesome a weapon of war unquestionably indicated U.S. intent, with the result that Turkey did successfully resist Soviet pressure to become a senior partner and re-negotiate the Montreux Convention to her advantage. Thus, it becomes questionable whether gunboat diplomacy will be effective when the country subject to coercion can present in its own behalf a flotilla of missile-armed patrol boats. It is not the actual capability of a weapon that assures its owner, but what the owner perceives that capability to be. The proliferation of missile patrol craft in the Mediterranean adds a new dimension to the naval picture.

If the U.S. 6th Fleet is to continue its mission of naval presence and "showing the flag," it must also consider the propriety of this strategy in view of the regard given

it by the emergent naval powers, small though they may be. It is one problem to have Soviet forces lessen 6th Fleet credibility and effectiveness, but quite another to find that the third world has a voice of its own.

C. THE STUDY

The specific details of how the study was conducted are outlined in the third chapter. Generally, naval order of battle information was extracted wholly from Janes Fighting Ships at five-year intervals beginning in 1960 through to 1975.² Ship types are broken down into eight categories based on speed and displacement and the number of units falling into these divisions counted for the fifteen year period. The main objective is to describe the evolution of the various navies in terms of the proportion of patrol craft to "other" types to ascertain what, if any, change in direction and composition have occurred.

The second objective will be to present those factors that have contributed to the development and direction of these forces and thereby make a general estimate with regard to future trends. The world has already been witness to a

²Blackman, R.V.B., and others, Janes Fighting Ships, 1960-61, 1965-66, 1970-71, 1975-76, McGraw-Hill.

half dozen incidents where patrol craft have played a major role. From the sinking of the Elath, the Pueblo capture, the Indo-Pakistani and Yom Kippur Wars, to the hijacking of the container ship Mayaguez, patrol craft have found ample opportunity for employment. While no merchantmen have been deliberately attacked,³ it is not too extreme to envisage an irate terrorist group attack an oil-laden super tanker, or belligerent tuna fishermen provoke certain countries whose extensive fishing grounds they have violated.

³ Indian Osa missile boats attacked Karachi harbor during her war with Pakistan in December of 1971 and accidentally sank a British merchantman.

II. THE MEDITERRANEAN

A. HISTORICAL OVERVIEW

The Mediterranean, of all the world's waterways, has probably exerted more influence upon the evolution of modern civilization than all others combined. From the north of Africa came Egyptian culture, while Europe produced the Aegean and the extensive reaches of Imperial Rome. The eastern shore witnessed the great religious gatherings of the followers of Christian and Islamic faiths. The intermingling there of so diverse an ethnic and religious heritage presaged the conflict and turmoil that was to beset the area in later times.

The Mediterranean has been variously considered a highway, a basin, and a border.⁴ Not since the times of the Roman Empire has there been a true Mare Nostrum.⁵ At that time Rome was the center of control and fully protected her maritime interests. There were few areas that could not be reached by sea with deliberate and effective action. And

⁴Zartman, I. W., "The Mediterranean, Bridge or Barrier?" U.S. Naval Institute Proceedings, v. 93, p. 64, Feb 1967.

⁵Reitzel, William A., "Seapower in the Mediterranean," U.S. Naval War College Review, v. XIX, no. 2, p. 1, Oct 1966.

today, there is no one nation which can claim the Mediterranean to be "our sea" in the sense that she could control the elements of seapower required to substantiate that claim. Despite the anxiety of Europeans who would indeed wish to see a bilateral withdrawal of U.S. and Soviet naval units, the divisive forces of economic, military, political, and social upheaval should assure the continued instability of the region.

At about the seventh century, the consolidation of Islamic power along the southern half of the Mediterranean, and European power along the north divided the area into a horizontal split.⁶ This north-south delineation continued into the 20th century as British naval power preserved well-traveled trade routes. Yet, since 1945, the Mediterranean has undergone a shift in orientation with the two superpowers operating at extremes and the major accesses under non-unified control. From the south, there is Arab pressure, from the northeast, communist, and from the north, the NATO alliance. What was once an inland sea dominated by those who lived upon its shores, has now become dominated by opposing forces from without.

⁶Ibid., p. 4.

Thus, the Mediterranean has, by virtue of the political pressures around the periphery, assumed the role of a border, in view of the fact that commercial traffic upon it would indicate highway. Today, the sea separates the Arab world from the West. NATO forces have consolidated their interests along the northern border, while European withdrawal from the south has allowed for an Arab front. Although far from unified, North Africa and the Eastern rim are becoming increasingly free from outside control, despite Soviet moves to the contrary.

Herein lies a key factor in the evolution of naval forces along the southern littoral. The sea is essentially polarized with the influence of U.S. and NATO seapower offset by the Soviet presence. In addition, the polarity has offered the Arab states the opportunity to extend their own influence, both within their own ranks and outward to the rest of the world.⁷ The absence of direct Western intervention has offered a climate conducive to the growth of national power as well as the need to have a recognized voice in matters relating to their own interests. The transfer of arms in exchange for military privileges as well as personal motives

⁷The world is still struggling to recover from the effects of ten-fold increases in the price of OPEC oil.

has contributed significantly to the tensions and conflicts of this century. Although naval forces have played a minor role in the outcomes of what have essentially been land wars between neighboring states, the value of a credible navy lies in the diplomatic advantage provided in dealing from a position of relative power. Again, it is important to recognize that a naval force composed mainly of patrol craft is not in itself a necessarily potent or formidable military component. In the case of a small Arab state attempting to negotiate diplomatic necessities with a superior power, there is less inclination to be influenced by "flag showing" if in fact a naval show of force can be maintained. In 1961, the government of Iraq claimed Kuwait to be an integral part of Iraqi territory. Due to a previously signed treaty, the British government sent a commando carrier with marines to reinforce the Kuwait border. The Iraqi claim was subsequently removed in the face of overwhelming British forces. Yet, in 1961, the Iraqi navy consisted of ten motor torpedo boats and four motor gunboats as compared with units of the British navy. Notwithstanding the moral and political issues of her claim to Kuwait, the Iraqis were hardly in a position to challenge the British, for whatever good it would have done.⁸

⁸Cable, op. cit., p. 48.

The presence of naval forces was apparently crucial to the success of the operation, yet had the Iraqis been better able to challenge British naval power, the outcome could have been far more favorable for them. In fact, a credible naval force would most likely have forced the British to consider either an alternate means of landing tanks and marines, or a more positive naval action. In all likelihood, an attack by Iraqi vessels upon British men-of-war may have ended in the destruction of the Iraqi navy altogether. On the other hand, a show of credible Iraqi naval force would have given Iraq a position from which to negotiate. Had the British thus recognized and hesitated in the face of a certain naval challenge, her resolve would have been suspect as would the strength of her continued support of Kuwait. Similarly, the need for a recognizable naval force has been acknowledged by the subject navies of this study, and the factors contributing to that acknowledgement are identifiable throughout the history of the Mediterranean.

B. STRATEGIC CONSIDERATIONS

In the context of this study and for purposes of continuity, the Mediterranean will be considered in the same perspective as the Middle East. Although the two of course embrace somewhat different geographical regions, there is

sufficient overlap both in strategic considerations as well as politico-economic ties to treat them as one.

In considering the strategic factors of the area, it is necessary to think in terms of the international arena and the degree to which the Middle East influences the conduct of those nations with an interest there. Certainly, varying levels of interest are involved depending upon the nations themselves. The Soviet and American interests are in the area of strategic parity and international influence. The European countries, Spain, France, Italy, and the like are concerned about the success of NATO in defending their interests as well as free passage and the continued flow of oil.

At the level of the states to which this report is directed, levels of concern are primarily continued survival as a nation and economic and political autonomy within the folds of the Arab world. Despite the international repercussions of the oil crisis of the early seventies, the petroleum exporting countries are still highly dependent upon the industrialized nations for most of those items by which a nation functions: consumer goods, machinery, arms, etc.

Similarly, the importance of seapower is as applicable to smaller nations as to the super powers. In fact, Mahan

lists three principal conditions of strategic value: position, military strength, and resources.⁹ These elements have particular application to the eastern Mediterranean. Certainly, the Dardenelles and the Straits of Sicily offer great naval strategic significance by virtue of their restrictiveness. Suez commands the canal route through which oil-laden ships may pass. And finally, the confines of the eastern basin are hardly suitable for super power naval maneuvers, yet are ideal for patrol craft. In preparing for war, Mahan observes the value in controlling one's coast to prevent the enemy from bombarding or blockading.¹⁰ It is important to note that the Egyptian attack of Israel in 1973 did not include an amphibious assault along the Mediterranean coast where Israeli patrol craft had established superiority. In fact, it was the harassment of Syrian and Egyptian shore installations by Saar patrol boats that forced the dedication of equipment for coastal defense that could have been better used elsewhere.¹¹

⁹Mahan, RADM Alfred T., Mahan on Naval Warfare, edited by Allan Westcott, p. 68, Little, Brown, & Co., 1918.

¹⁰Ibid., p. 129.

¹¹Erell, RADM Shlomo, "Israeli Saar FPB's Pass Combat Test In Yom Kippur War," U. S. Naval Institute Proceedings, v. 100, no. 4/859, p. 118, September 1974.

In terms of military strength, the Mediterranean navies are comparatively weak by even Greek or Italian standards. But Arab grievances are more directed at Israelis and other Arabs than at Greeks or Italians. Thus, military strength at this level is of considerable importance in view of the limited resources of the participants and the supplier-client relationships the arms trade has created. In this regard, it has even been suggested that the Soviet favored the conflicts between the Arabs and the Israelis because the depletion of arms resulting from war gave the Soviets the opportunity to replace lost equipment and thereby strengthen their position among their clients.¹² Yet, as the results of the various conflicts have shown, numbers of arms are not an indicator of superiority. In both the 1967 and 1973 wars, Israel had considerably less equipment than the Arabs, yet in neither war was she defeated. This, however, was due in no small part to the roles played by the U.S. and U.S.S.R. in controlling the outcome to the extent that the status quo was maintained.

Finally, the resources mentioned by Mahan are those wants and needs of men and materiel that allow a modern navy to

¹²Blixt, Capt Melvin D., "Soviet Objectives in the Eastern Mediterranean," U.S. Naval War College Review, v. XXI, no. 7, p. 9, March 1969.

function. Israel in particular is most vulnerable in this regard for her land lines of communication would pass through hostile country while the southern approaches via Bab El Mandeb are subject to Egyptian influence. Thus air travel and merchant ship traffic through the Mediterranean are her only life lines. As will be shown, this lack of economic independence among the countries of the Mediterranean littoral is a significant factor in explaining the trend toward patrol craft. The economics of maintaining a naval force are extremely burdensome, for unlike aircraft or tanks which may sit idle, there is little to be gained from ships that cannot put to sea.

Politically, the eastern Mediterranean is as complex as it is tumultuous. Whereas the past successes may have come on the tides of armed intervention, it would appear that today military factors are less important than diplomatic, ideological, and economic ones.¹³ That is, it would be a wise course of action for the super powers to approach Middle Eastern affairs from the non-military view. The inherent instability of the region should ensure continuation of tensions from within, as Soviet success in exploiting Arab unrest has proven.

¹³Brown, Neville, "The Eastern Mediterranean: A Fulcrum of World Power," Orbis, p. 934, Foreign Policy Research Institute, Fall 1973.

Three major political alliances should be mentioned: NATO, the Arab League, and CENTO. Basically, the main purpose of NATO was to prevent the member countries from falling victim to the spread of communism. This objective has been realized in that no signatory to the charter has come under Soviet dominance. There are two NATO naval commands that would have responsibility for Mediterranean security in wartime: ComStrikeForSouth commanded by the 6th Fleet commander, and ComNavSouth, headed by an Italian Admiral. Both are under CinCSouth, an American Admiral headquartered at Naples. U.S. membership in NATO is aimed at preventing the spread of Soviet influence while the overall mission is more one of defending the southern flank of Europe and assuring control of the sea itself.

The Arab League was established in 1945 in part to discourage the founding of a Jewish state. Headquarters are in Cairo and Egyptian actions have strongly encouraged policies against Israel while seeking League leadership. Hostile attitudes among the Arab members has reduced the effectiveness of the League while unity has been found in only one issue: opposition to Israel. Despite the humiliating defeats at the hands of the Israelis, the members of the League have sought to keep the organization intact for several reasons:

because of its value as a common political front, a quasi-regional organization recognized as such, and as an instrument of propaganda.¹⁴

CENTO is the official name given in 1959 to the original Baghdad Pact of 1955, the defense alliance between Pakistan, Turkey, Britain, and Iran. The United States, while not joining, sent observers and provided some financial support. The Middle East Treaty Organization (METO) was originally created to discourage Soviet aggression in Southwest Asia. The earlier aims of the Pact receded with Pakistan's associations with the U.S.S.R. and China. CENTO has become more oriented toward cultivating economic planning and coordination.

Apart from the obvious factors of geography that have contributed to the strategic make-up of the Mediterranean, it is worth discussing three key elements that help explain the power struggle that exists in the area. Significantly, it is this very power struggle and the attendant vying for international favors through arms sales and military assistance pacts that has led to the development of patrol boat navies.

¹⁴Political Dictionary of the Middle East in the 20th Century, ed. by Yaacov Shimon and Evyatar Levine, p. 41, The Jerusalem Publishing House Ltd., 1974.

These fundamental reasons may be succinctly listed as oil, Suez, and flanking advantage.¹⁵ It is this third factor that probably most influences super power strategic interests in the Mediterranean. It is reasoned that whoever controls the Mediterranean, is in the advantageous position of outflanking the forward position of the opponent. It is to this very purpose that the 6th Fleet maintains a strategic offensive capability in the Mediterranean: to maintain a forward position from which a minimum reaction time retaliatory strike may be committed. With equal interest, the Soviet Union maintains a comparably-sized squadron intended to negate the 6th Fleet strike capability, understandably emphasizing anti-submarine warfare to combat the submarine-launched ballistic missile threat as well as protect her own units from attack.

Oil has become as important a factor in the Mediterranean as military advantage. The Middle East and Persian Gulf are estimated to contain as much as 65% of the world's total known reserves, while vast deposits have been discovered in the Sahara. Oil sales are not only the principal sources of

¹⁵Roskill, Capt Stephen W., "A Strategic Analysis of the Mediterranean," U. S. Naval Institute Proceedings Naval Review 1969, p. 27, 1969.

revenue for many of the Middle East nations, but the diplomatic advantages offered by control of price and quantity are only beginning to be realized by such organizations as OPEC.

The Suez crisis of 1956 demonstrated the vulnerability of the routes of supply. Thus, alternate fields in North Africa were developed as a hedge against problems in the Middle East. The safeguard of the Libyan and Algerian oil industries became a Western concern, the U.S. after 1956 assuming responsibility for its defense west of Suez, and Britain being responsible for the area to the east. In fact, the surrender of Aden in 1967 and withdrawal from the Persian Gulf in 1971 marked the end of permanent British military presence in the Middle East.¹⁶ For whatever protection there was to be gained from ties with Britain, her former protectorates were forced to accept the challenges of independence in an arena marked by strife. The end of British influence was the beginning of Soviet adventure. It was left to the United States and those members of the Western Alliance to deal with the security and integrity of the Mediterranean area.

The strategic significance of Suez lies not so much in the geography of that waterway, but in the political and diplomatic

¹⁶Hurewitz, J. C., Middle East Politics: The Military Dimension, p. 73, Thomson-Shore, Inc., 1974.

reversals due to the Arab-Israeli issue. Additionally, Soviet attempts at influencing Egyptian control of the canal have for the time being been nullified. Yet the instability of the region offers a constant threat of erupting and spilling over and involving the canal to some degree. In most dealings with Egypt, it therefore becomes necessary to take into account the need for a free and open passage. Certainly, the U.S. Navy's interest in Diego Garcia in the Indian Ocean, and the Soviet incursions in Somalia lend added importance to a quick and easy access route from the Mediterranean to points South and East. Additionally, despite oil production in the Western Mediterranean, the Persian Gulf oil fields will remain crucial to the needs of Europe and the West, and thus vulnerable to interruptions of petroleum flow. The Soviets have apparently recognized the demands and constraints of the situation as reflected in an apparent shift in policy interest to areas south and east of Suez and into the Indian Ocean.¹⁷ This is by no means a suggestion that Soviet interests in the Mediterranean are diminished. For what was essentially a "Western Lake" ten years ago is

¹⁷Chief of Naval Operations, The Environment for the Projection of U.S. Military Power in the 1980-1990 Period, p. 3, September 1973.

now as much a Russian-influenced operating area as what the 6th Fleet ever enjoyed.

Thus, the strategic considerations of the Mediterranean are concerned with the military confrontation of the super powers combined with the political uncertainties of the Middle East. Additionally, the flow of Persian Gulf oil through the Suez canal constitutes the jugular vein of Western Europe. Those small nations astride this precarious sea route have great potential with regard to playing significant roles in future crises and gaining maximum benefit from the U.S.-Soviet rivalry, while Europe waits and watches.

C. THE PHYSICAL ENVIRONMENT VERSUS NAVAL OPERATIONS

A persistent and somewhat valid argument against patrol craft centers on their range and sea-keeping capabilities. This criticism is particularly applicable to navies operating out of regimes either facing the open ocean such as Morocco, or from areas of known climactic intensities such as Norway on the North Sea. But in the cases of Indonesia and North Korea, both of which enjoy proximity to significant waterways (Malacca and Korean Straits), there is protection offered by land masses and shallows. Not surprisingly, both countries have made appreciable investments in patrol craft.

The Mediterranean, by virtue of limited reaches, moderate climatology and strategic geography, is quite conducive to small craft operations. Distances are small when compared to those of the Pacific and Atlantic. From Gibraltar to Port Said is slightly over nineteen-hundred nautical miles, and Port Said to Athens is almost six-hundred nautical miles. In that many patrol craft have ranges up to 2500 miles at sixteen knots, distance alone is not that inhibiting a factor. In fact, in 1974, the Israelis sailed from the Mediterranean around Africa to Haifa without incident in two Saar 4 patrol boats, proving the sea-worthiness of these craft.

The Mediterranean averages 1,200 fathoms in depth with the maximum at 2,650 off southern Greece. The 100 fathom curve lies fairly close to the coast except off Tunisia where it is at 150 nautical miles, 10 to 40 nautical miles off Syria, and 10 nautical miles from the Bosphorus.

Currents are not particularly strong and the rise and fall of tides negligible, except in the case of the Bosphorus where high winds may cause variations of three to five feet. The prevailing winds are generally mild with weather conditions most favorable in May and June. The Aegean may experience force 7 (Beaufort) winds from the northeast in summer while the Sirocco from the south may bring severe dust storms.

Tunisia, Libya, and Egypt have flat, sandy shores suitable for landing, however, penetration inland would be difficult due to the expansive sand dune and desert regime. Syria and Lebanon also have flat beaches but with mountain ranges to the rear. Peculiarly, the North African coast is devoid of islands and most of the big cities and industries are close to the coast. The northern Mediterranean on the other hand has numerous islands, an irregular coastline with abrupt coastal mountains and more diversely located population centers. The implication here is that the countries along the southern and eastern rim are especially vulnerable to shore bombardment and amphibious assault. Thus, the need for an effective naval defense of the coastal areas is readily apparent.

Probably the single most important aspect of Mediterranean strategy lies in the control of the strategic straits. The Sicilian Channel divides the eastern and western basins and is but 75 nautical miles wide at the narrowest point. Both Malta and Sicily command the approaches to the channel, although an alternate passage is offered through the very narrow (1.5 nm) Strait of Messina.

The Dardanelles and the Bosphorus separate Europe from Asia and the Soviet Black Sea Fleet from the Mediterranean.

The Montreux Convention of 1936 gave Turkey control of the straits which somewhat limits Soviet passage and allows Turkish rights of denial should she consider herself threatened by war. These straits, because of their extreme restrictiveness and ease of defense are of critical importance to Soviet strategy in times of hostilities.

At the western extreme of the Mediterranean, the Straits of Gibraltar control access to the Atlantic. The often raised question over Spanish or British control of the straits somewhat unsettles the degree of security NATO members would prefer to feel regarding this vital waterway. Additionally, patrol craft of the Moroccan navy have more than adequate capacity to engage ships attempting to transit the area. In fact, Morocco, Algeria, and Tunisia, all of which have acquired patrol boats, are in a position to exercise control over the entire approach and transit through the western Mediterranean.

Thus, it can be seen that the physical configuration of the entire Mediterranean is suitable for the operation of small craft, not only in range and tactical demands, but because the sea is the setting for the rival navies of the super powers and the NATO forces. A reasonable scenario for conflict in which the Soviets were involved would see their

attempt to initially obtain control of the Turkish Straits.¹⁸ This would be in concert with actions taken by the already-in-place units of the Mediterranean squadron to neutralize NATO and 6th Fleet forces. Since air cover would be vital to the Soviet Fleet, they would most likely remain in the eastern basin where their own aircraft could support them and enemy aircraft from Western forces would be at a disadvantage.

In any case, a general or even limited action will see a concerted effort to secure the entire Mediterranean by both sides, with naval forces playing a major role. It is worth speculating that those countries with naval forces still intact at this time will find themselves in a highly fluid position depending on their political commitments prior to the outbreak of hostilities and conduct in the interim.

¹⁸Margaritis, VADM Constantine, "A Strategic Analysis of the Eastern Mediterranean and the Black Sea," U. S. Naval Institute Proceedings, v. 99, no. 843, p. 140, May 1973.

III. COMPOSITION OF NAVAL FORCES

The purpose of this study is to examine composition and development of the naval forces since 1960 of nine countries of the southern and eastern Mediterranean littoral. Emphasis is placed on the degree to which fast patrol craft, especially missile-firing patrol craft, have become a part of these navies in terms of numbers as a percentage of the total. In that missile boats offer a new dimension of naval capability, offensive as well as defensive, it becomes quite significant a factor in assessing the naval picture in this area when strategic considerations are involved. Syria, Egypt, Tunisia, and Morocco all lie in close proximity to the four most important straits or waterways in the Mediterranean. Missile boats are a part of each of these country's navies and thus present a serious threat worth considering in the formulation of plans and naval assessments.

The remaining five countries, Cyprus, Lebanon, Israel, Libya, and Algeria complete the littoral rim of the Mediterranean and in this regard, i.e., that of delimiting the northern half of the area from the southern half, form in part the logic for selection of states for the study. As previously mentioned, the Mediterranean has become divided

along an east-west line separating the European northern half from the Arab south. Also, the division has other justification. The ethnic and political composition is distinct from the north while most of the conflicts of the past decade have been inter-Arab or Arab-Israeli. For the most part, super power involvement in the Mediterranean has shown a marked delineation of interest and foreign policy conduct between the NATO and Warsaw Pact countries and the countries of the Middle East and North Africa. Finally, the geography of the northern rim is fairly distinct from that of the south, being mountainous with high gradient along the coast, and having many small islands and land projections, particularly in the Aegean area. In contrast, the North African coast is flat and sandy with wide beaches and shallow off-shore waters. The hinterlands are essentially sandy and low but are higher in the areas adjacent to Syria and Lebanon.

The year 1960 was chosen for two reasons. First, because most of the navies were either formed subsequent to that time or acquired their patrol craft in the sixties. To be sure, several countries had patrol craft prior to 1960 but were not missile-equipped. The first units of this type were Soviet Komars supplied to Egypt in 1962, and as will be shown, it was the introduction of these craft into the area

by the Soviets that contributed to the trend toward patrol craft in the late sixties and early seventies. The second reason for beginning the study at the 1960 mark was simply for reasons of brevity. Little would have been added in terms of supportive data and the purposes of the study were amply met within the period chosen. However, a case could certainly be made regarding the roles of patrol boats in general for all the Mediterranean countries prior to World War II. cursory examination of trends were made in the process of preparing this report, and the initial indications were that trends revealed herein are similar for the entire area. That is, the past three decades show an overall leaning toward smaller and faster craft, with emphasis placed on versatility and maneuverability. Overall average displacement has become smaller, not because of attrition of larger ships so much, but because large numbers of small craft were acquired, thus reducing the average size.

For the purposes of classifying ship types to facilitate counting, eight groups were established, all of which were surface combatants. Thus, submarines, tenders, support ships, and other auxiliaries were not included. Also, craft of comparatively small size were omitted, such as the six ton Firefish craft of the Israeli navy. The eight categories

are as follows: Destroyers (DES), Frigates (FRI), Corvettes (COR), Mine Warfare (MIN), Patrol (PAT), Fast Patrol Missile (FPM), Fast Patrol Torpedo (FPT), and Fast Patrol Gunboat (FPG). A distinction was made between Patrol (PAT) and the remaining patrol types as to speed. That is, a patrol boat as listed in Jane's Fighting Ships¹⁹ that has a speed less than 20 knots will be classified as simply Patrol. For example, in 1960, Syria's navy consisted of three 16-knot patrol vessels, and 12 40-knot fast patrol boats. The speed differential is so great that the two types cannot be considered in the same class, especially in view of the fact that high speed is one of the strengths of modern patrol craft and which gives it great maneuverability.

Mine warfare craft are included in the naval-order-of-battle because they are armed and highly versatile, and also because in some cases, minesweepers either made up the core of a newly-formed navy, as in the case of Algeria who received two coastal minesweepers in 1962 from Egypt, or because minesweepers were a significant percentage of the total as in the 1960 Egyptian navy.

¹⁹For continuity, all NOB information unless otherwise indicated has been extracted from Jane's Fighting Ships 1960-1975.

Three aspects of naval combatants are considered: total number, displacement, and speed. There are other factors that may be considered, but which are beyond the scope of this report. As previously stated, the intent here is to show the changes which have taken place in the last 15 years in terms of composition, speed, and displacement. Analysis of weapons is limited to the extent that missile-equipped craft gives greater credibility to these small navies and thereby requires serious consideration of what was heretofore a minor element of the military posture of the region.

This section contains descriptions of the individual countries and then treats the area as a whole. At the end of each part, a graph is offered which depicts the elements of each navy at five-year intervals beginning in 1960. Figures indicate the conditions that exist at the indicated time period. For example, the graph for Algeria indicates two mine warfare (MIN) in 1965, although these units were actually acquired in 1962.

A. CYPRUS

1. Political and Economic Structure

Cyprus achieved independence from Britain in 1960 in hopes of achieving order out of the strife of over a decade. The Greek majority sought union with Greece (enosis) and had

conducted guerrilla warfare against the Turkish and British minorities in hopes of achieving this. The Turks feared Greek oppression and thus opposed enosis, resulting in tension and endangering the NATO Alliance. The Zurich agreement of 1959, signed by Greece, Turkey, and the Greek-Turk Cypriots, forbade enosis and provided for safeguarding of the Turkish minority rights. Today, Greece no longer favors enosis but Turkey feels compelled to act in behalf of the Turkish-Cypriot minority. The Makarios government has rejected outside impositions as well as autonomy for the two minorities, yet the situation remains unresolved. Economically, Cyprus is mainly agrarian, with limited mining and textile manufacturing.

2. Strategic Considerations

Historically, control of Cyprus assured control of the Eastern Mediterranean.²⁰ This has been demonstrated by British actions in two world wars and the staging of the Suez campaign in 1956. Additionally, Britain retained base rights on the island when she granted independence in 1959. Communist inroads in Cyprus are feared as jeopardizing NATO interests although in the 1970 elections, they were elected

²⁰Dupuy, Col T. N. and Blanchard, Col Wendell, The Almanac of World Military Power, 2nd ed., p. 76, R.R. Bowker Co., 1972.

to nine seats in the House of Representatives. Finally, Cyprus sits in close proximity to the shipping lanes used by oil-laden tankers bringing petroleum products out of Syria.

3. Defense Structure

The 1960 Constitution provided for four military organizations with the Cypriot Army being primary and having a composition of 60 per cent Greek and 40 per cent Turk.²¹ But political turmoil caused the army to split into Greek and Turkish factions, so by 1970, there were eight military and three police forces on the island, with the Cypriot Navy being formed in 1964. This small force was created by the government along with the National Guard with the intended purpose of reducing the infiltration of Turks and the smuggling of arms to support Turkish forces. The National Guard and the Cypriot Navy are responsible to the Ministry of Defense who is Turkish as specified by the Constitution, but has not functioned since 1963.

4. Force Composition

In 1964, President Makarios requested aid from the Soviet Union. Russian interest in Cyprus involved preserving independence from Greece and Turkey, both of whom are NATO

²¹Keefe, Eugene K., and others, American University Area Handbook for Cyprus, p. 209, U.S. Govt. Printing Office, 1971.

members. Although little data is available, it is estimated that this aid was not substantial.²²

By 1965, one year after the establishment of the navy, Cyprus had two patrol craft, a third having been destroyed by Turkish aircraft. Three craft are listed, however, in Table 1 as an indication of initial forces. Also at this time are six Soviet P-4 FPGs which were part of the aid package requested by Makarios. These 40-knot vessels were ideal for dealing with the smuggling problems previously mentioned.

In 1975, the Cypriot Navy has undergone little change in either number or type, except that now the Soviet P-4s are classified as torpedo craft (FPT) by Jane's.²³ Due to her limited economy and political problems, it is doubtful that the Cypriot Navy will undergo any radical changes in the immediate future.

²²The Arms Trade with the Third World, Stockholm International Peace Research Institute, p. 203, Humanities Press, 1971.

²³Blackman, op. cit., 1975-76, p. 92.

Table 1

CYPRUS NOB 1960 - 1975

	DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960								
1965					3(.13)18			6(.03)45
1970					2(.13)20			6(.03)45
1975					2(.13)20		6(.03)50	

	Total #	Av. Size	Av. Speed
1965	9	.06	36
1975	8	.06	43

*key: number(size)speed = x(.xx)xx

size = tons X 1000

B. SYRIA

1. Political and Economic Structure

In 1958, Syria formed an alliance with Egypt, the UAR, and between 1958-61, received aid from the U.S.S.R. In 1961, Syria broke ties with Egypt, and despite several years of pro-Western governments, continued to accept aid from the Soviets. From 1963 until the present, the Ba'th Party has been in control of the government, and in a coup in 1970, General Hafiz al-Asad came to power. Since as early as 1946, the government has been increasingly influenced by the military and has been one of the staunchest opponents of Israel. Although the communist party is officially banned, its existence is tolerated. The radio and press are completely owned or controlled by the party, mostly serving as mouthpieces of the government.

Syria has an agrarian economy but oil has been discovered in the northeast and in 1970, 4.5 million tons were produced. Pipelines from Iraq traverse Syrian territory for which transit royalties are received. Fertilizer industries and irrigation projects have been undertaken to improve the economy along with Soviet aid.

2. Strategic Considerations

Syria's strategic importance lies in her position along the "northern tier" and the effect her ties with the

Soviet Union will have on preserving that defense position. Secondly, the oil pipelines from Iraq and Saudi Arabia which cross that territory are not only subject to Syrian control, but could be the object of foreign take-over. Of personal interest to Syria is the aspect of Israeli control of the commanding Golan Heights. It is reasoned that the capital of Damascus is virtually indefensible against a determined Israeli attack.²⁴

3. Defense Structure

President al-Asad is both premier and defense minister. The navy is subordinate to the army and in fact, together with the air force has the additional role of supporting the army's ground force operations. The specific mission of the armed forces has been to train and prepare for war with Israel.²⁵ The navy maintains a small facility at Latakia although most major repairs and overhaul must be performed at foreign yards. Naval headquarters are also located at Latakia where the director of naval operations has control over all afloat units.

²⁴Dupuy, op. cit., p. 186.

²⁵Nyrop, Richard F., and others, American University Handbook for Syria, p. 284, U.S. Govt. Printing Office, 1971.

4. Force Composition

The Syrian navy was formed in 1950 as a part of the army. In 1957, the Soviet Union supplied five motor torpedo boats and by 1960 a total of 12 were on hand, along with three French-supplied ex-submarine chasers.²⁶ In 1962, the U.S.S.R. transferred two mine sweepers and in 1966, 10 Komar missile patrol boats. In the June 1967 war with Israel, a substantial amount of equipment was lost and by 1970, only six of the Komars remained. In 1973, two Osa class missile boats were received from the Soviets but apparently were lost to the Israelis in the 1973 Yom Kippur War, but by 1974, three replacements were furnished. By supplying the Syrian Navy with the missile boats, the balance of forces (naval) among the Arab States was seriously upset, as Egypt and Algeria also received substantial Soviet aid. Recognizing the need to establish naval parity, Israel transacted a deal with France to deliver 12 Saar gunboats by 1968-69, while at the same time continuing on a development program for the Gabriel anti-shipping missile.

²⁶Blackman, op. cit., 1960-61, p. 279.

Table 2

SYRIA NOB 1960 - 1975

DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960				3(.13)16		12(.05)40	
1965			2(.60)18	3(.13)16		15(.05)40	
1970			2(.60)18	3(.13)16	6(.08)40	17(.05)40	
1975			1(.60)18	3(.13)16	6(.08)40 6(.20)32	16(.03)50	

Total #	Av. Size	Av. Speed
1960	15	.07
1975	32	.10

*key: number(size)speed = x(.xx)xx

size = tons X 1000

C. LEBANON

1. Political and Economic Structure

Lebanon has attempted to remain non-committed in the inter-Arab disputes and declined to join the Baghdad Pact in 1955. She has maintained a relationship with France to the extent that arms were provided, while in 1967, France publicly stated her support of Lebanon's defense. The political framework of the country is decidedly French in concept and unlike many of the other Arab states, religious influences are more dominant than military. Although Lebanon did not participate in the June war, tensions with Israel have increased since 1965 and continued reports of Palestinian commando units operating out of Lebanon have brought reprisals from Israel. Beirut is a major world center for gold transactions and banking, and the two ports of Sidon and Tripoli are important oil transshipment points.

2. Strategic Considerations

Lebanon has shown two significant factors relating to her importance. First, the non-military government has attempted to play down the Arab-Israeli dispute while at the same time displaying a degree of stability. Secondly, the freedom of press and information, especially regarding the Middle East conflicts, has made Lebanon a source of Western

ideas and influence through which anti-communist sentiment might be encouraged. In 1970, the U.S. Congress proposed a 15 million dollar aid package to help Lebanon's quest for peace and stability.²⁷

3. Defense Structure

The Lebanese Navy was formed in 1953 as an integral part of the army, with the primary mission of coastal defense and anti-smuggling. The President acts as commander-in-chief and has direct liaison with the Commanding General of the Army. Naval headquarters are in Beirut where logistical support is provided by the army. It is estimated that the navy has little capability beyond that associated with maintaining internal security, and, in fact, the entire military due to its limited resources may be unable to defend the nation against a determined aggressor.²⁸

4. Force Composition

In 1975, the total personnel in the navy numbered about 250 officers and men. The principal supplier of arms has been France who between 1955 and 1960 provided four patrol craft. Also, in 1970, Libya offered up to 16 million

²⁷Stockholm, op. cit., p. 553.

²⁸Smith, Henry H., and others, American University Area Handbook for Lebanon, U.S. Govt. Printing Office, p. 300, 1974.

in aid in return for Lebanon's pledge to participate fully in the battle against Israel.²⁹

The navy in 1960 consisted of the three French-supplied patrol craft and one fast gunboat. Although not considered for counting purposes, the force also had on hand a U.S. landing craft transferred in 1958. The decade of the sixties saw practically no change in composition until about 1970 when a fourth patrol boat was acquired, an old British-built motor launch.

Thus, in keeping with the government's policies of limited involvement, there seems little to suggest that the navy will expand appreciably in the near future. Lebanon remains however, a source of Israeli concern due to the existence of Palestinian guerrillas within her borders. It remains to be seen if the more aggressive attitudes of Syria will continue to be resisted, or if the current civil disorders will bring about changes within the political and defense structure of the nation.

²⁹Stockholm, op. cit., p. 553.

Table 3

LEBANON NOB 1960 - 1975

	DES	FRI	COR	MIN	PAT	FPM	FPT	FPT
1960					3(.03)19			1(.10)27
1965					3(.03)19			1(.10)27
1970					3(.03)19 1(.13)16			1(.11)27
1975					3(.03)19 1(.13)16			1(.11)27

	Total #	Av. Size	Av. Speed
1960	4	.05	21
1975	5	.07	20

*key: number(size)speed = x(.xx)xx

size = tons X 1000

D. ISRAEL

1. Political and Economic Structure

The history of Israeli politics is as profound as it is complex, and full development of its origins and significance is beyond the scope of this study. Suffice it to say that since the establishment of the Jewish State in 1948, Israel has sought to maintain her existence despite the vigorous objections of many Arab States. The Palestinian question has certainly been a source of conflict as has the treatment of non-Jews by Israel. Further, the acquisition of land as a result of war far beyond that as proposed by the original United Nation's resolution for the Israeli State has exacerbated relations, especially from the Egyptians and Jordanians. In this regard, Egypt has made peace offerings predicated upon the return to the pre-war limits of 1967, an offer rejected by the Israeli government.

Since 1960, both the U.S. and West Germany have given political and military support to Israel, with France supplying arms in quantity. However, France suspended aid during the June war and after she resolved the Algerian problem, began looking as early as 1965 for additional Arab clients. In 1968, she agreed to sell Mirage fighters to Iraq, while still imposing an arms embargo against Israel. Since

France at this time was Israel's only supplier of sophisticated arms, the embargo had the effect of causing Israel to seek new suppliers. The competition by many of the Western countries, i.e., United States, Britain, France, and West Germany to develop arms markets in the Middle East had the effect of enlivening the Israeli-Arab arms race.³⁰ As mentioned earlier, the possession of arms tends to beget their own use, and Israel in particular was not acquiring weapons for local demonstrative purposes but for employment in combat.

Economically, Israel is one of the few countries of the Middle East with the capability to manufacture weapons and refurbish or repair used equipment. Industrialization is widespread, although light, and efforts are being made to expand into electronics equipment manufacturing. Israel has produced the Reshef patrol boat, Gabriel missile, and a new supersonic fighter, the Kfir, as well as assorted small arms. Natural resources are minimal and the preponderance of imported goods has created an unfavorable balance of payments as well as a vulnerability to Arab boycotts.

2. Strategic Considerations

Within the entire Eastern Mediterranean region, Israel's strategic significance lies in her proximity to

³⁰Hurewitz, op. cit., p. 486.

Suez and the degree of super power involvement proceeding from their respective alliances and foreign policy interests. Although it has been often speculated that the Soviets convinced Syria of an impending Israeli attack and thus precipitated the June War of 1967, the super powers have essentially adopted the role of observer during open hostilities. At the outset of the June War of 1967, the Soviets in fact took the initiative and used the Washington-Moscow "hotline" to proclaim their intentions of non-interference. Thus the two overriding concerns of the U.S. and Soviet Union were to avoid direct confrontation and prevent a total Arab or Israeli victory.

3. Defense Structure

Control of the Israeli Defense Force rests with the Prime Minister while direct responsibility for administration of the armed forces is exercised by the Defense Minister. About 75,000 personnel are on regular active duty, but in the event of mobilation, this figure swells to approximately 300,000 within a week. It is this ability to activate reserve personnel on short notice that allows the economy to prosper while so many are subject to military service. However, when a high number of reservists are kept active, there is a severe strain on the economy as industry suffers from absenteeism.

4. Force Composition

The navy keeps approximately 4,500 personnel active but in the event of mobilization the number increases to 8,000, as individuals report to their duty stations within 48 hours.³¹ The navy was originally intended to serve as a small coastal defense force but the high degree of success of the Saar boats and the need to defend interests in the Gulf of Aqaba has produced an effective fighting force. Since 1967, three significant developments have altered the strategic naval view: (1) increased length of coastline since the June war, (2) the increased Soviet presence and aid to the Egyptian Navy, and (3) increased probabilities of an amphibious assault from Egypt to circumvent Israeli defenses.³² To achieve naval advantage in the face of superior numbers, the Israelis strengthened their defense perimeter to take decisive offensive action at every opportunity. Thus, the naval forces had been given an important role in the country's defense, and the acquisition of the fast patrol boat proved well suited to the task.

³¹Dupuy, op. cit., p. 173.

³²Miller, Martin J., Jr., "The Israeli Navy: 26 Years of Non-Peace," U.S. Naval Institute Proceedings, v. 101, no. 2, p. 51, February 1975.

In 1960, there were 15 units of which four were major combatants. Between 1968 and 1975, a total of 24 Saar and Reshef Class missile patrol craft had been acquired in response to the Komars and Osas supplied by the Soviet Union to Egypt, Syria, and Algeria prior to 1968. Significantly, both destroyers are not listed in the 1972-73 edition of Jane's.³³ This deliberate move away from large combatants attests to the confidence the Israelis place in their patrol craft to form the backbone of the new navy. In fact, Israeli shipyards are now producing a successor to the Saar. The Reshef is said to have twice the firepower and three times the range of Saar.³⁴ It is designed to operate for long periods at sea while providing increased capability to patrol coastal areas.

Thus, by 1975, the Israeli navy became truly a patrol boat force of over 40 units with more being built. Considering each missile boat has six to eight launchers, the navy could deploy upwards of 200 Gabriels, now believed to have an increased range of 26 nautical

³³Blackman, op. cit., 1972-73, p. 173.

³⁴"Israel's New Missile-Armed Patrol Boats," International Defense Review, v. 6, no. 3, p. 342, June 1973.

miles.³⁵ Also, the 24 missile boats now in service have the versatility to be used as gunboats, while others will employ an anti-submarine warfare capability.

³⁵Cohen, Irvine J., "Israeli Missile Boats," National Defense, v. LIX, no. 328, p. 296, January-February 1975.

Table 4

ISRAEL NOB 1960 - 1975

	DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960	2(2.6)37	1(1.5)28 1(2.4)20			1(.50)18 1(.09)19 1(.05)12		3(.04)40 3(.06)42 1(.04)40	1(.11)22
1965	2(2.6)31	1(1.5)25			1(.45)18 3(.05)12		3(.04)40 6(.06)42 3(.04)40	2(.11)22
1970	1(2.6)31 1(1.5)25				1(.45)18 1(.05)12	12(.25)40	3(.04)40 6(.06)42	4(.03)25 1(.11)22
1975						12(.25)40 12(.40)32		4(.03)25 2(.11)22 10(.04)25

	Total #	Av. Size	Av. Speed
1960	15	.68	32
1975	40	.21	29

*key: number(size)speed = x(.xx)xx

size = tons X 1000

E. EGYPT

1. Political and Economic Structure

An examination of current Egyptian politics must necessarily begin in 1952 when a junta calling themselves the "Free Officers," led by General Muhammed Nagib and Colonel Nasir, succeeded in overthrowing King Farouq in a military coup. From that time on, the story is one of Egyptian attempts at securing arms from the West and then eventually from the U.S.S.R. to enable the Nasir regime to solidify the leadership of the Arab States and mount an effective program against Israel. Indeed, it was Nasir himself who promoted the major policies which challenged Western supremacy in the Middle East, while British promotion of the Baghdad Pact pushed Egypt into relations with the Soviet Union.³⁶ The heavy military requirements of two major wars have made Egypt dependent upon the U.S.S.R., with the resultant problem of maintaining the advantage of Soviet aid while upholding its own national interests.³⁷ But by the early seventies, the new president, Anwar Sadat, found extreme differences with his Russian trading partner and

³⁶Hurewitz, op. cit., p. 138.

³⁷Stockholm, op. cit., p. 527.

relations cooled considerably to the extent that the Soviets became "persona non grata" while the U.S. Secretary of State Henry Kissinger appears to have re-established a favorable climate between their respective countries.

Egypt's economic condition was seriously damaged both by the closure of the Suez Canal and by the tremendous costs of the military effort against Israel. The population has grown steadily while agriculture has not kept pace with demand. Attempts have been made to establish industry, both basic and heavy, concentrating on electricity, minerals and oil products. Heavy dependence on foreign-supplied war materials has also created a limited ability to manufacture weapons domestically.

2. Strategic Considerations

First and foremost is Egypt's command of the Suez Canal linking the oil-rich Persian Gulf with Western Europe. Added to this is the radicalism of Egyptian policies in regard to the other Arab states and the unsettled Israeli problem. As long as the Soviet Union can play Arab nationalism against the West, Egyptian politics and attitudes will provide the opportunity. The conflict with Israel based on territorial claims and occupancy is far from settled, while long-standing passions and distrust prevent an easy solution.

Finally, Egyptian defeats at the hands of numerically inferior Israelis has often been attributed to low morale and ineffective leadership within the military officership. The dependence upon Soviet arms has created an army dependent upon outsiders for parts, training, and technical instruction. The cessation of Soviet military aid to Egypt thus places her in an extremely vulnerable position, not only militarily with regard to Israel, but politically as the self-proclaimed leader of the Arab world.

3. Defense Structure

The President of the Republic is the supreme commander-in-chief of the unified armed forces and presides over the National Defense Council. There is a single military Commander-in-Chief over the armed forces with direct access to the President and who is not responsible to the War Minister.³⁸ Total personnel under arms numbers over 300,000 of which about 14,000 are in the naval forces. The commander of the navy is directly subordinate to the chief of staff of the armed forces who is also deputy commander in chief. Despite having the largest armed force of any Arab country, Egypt's

³⁸Dupuy, op. cit., p. 161.

main influence in an East-West confrontation is seen as diplomatic rather than military.³⁹

4. Force Composition

In the first half of the 50's, the Egyptian Navy received 10 vessels from Britain, which included destroyers, corvettes, and torpedo boats. From 1956 until the present, the Soviet Union has supplied the vast majority of naval craft including eight Komar and 12 Osa missile boats in the period between 1962 and 1966. It was the acquisition of these units that more than any other factor contributed to the drive toward fast patrol craft, especially for the Israeli Navy.

In 1960, the Egyptian Navy had 22 vessels in the categories DES, FRI, COR, and MIN, and 51 in the patrol group for a 70% ratio of patrol to total. This figure remains essentially the same for 1976. By comparison, the Israeli Navy had 70% patrol craft in 1960 with four large units, but in 1976, there are 40 patrol craft and no large combatants. Not only has Israel's Navy shown significant growth (167%) but patrol craft constitute 100% of the total.

³⁹Smith, Harvey H., and others, American University Area Handbook for the United Arab Republic (Egypt), p. 454, U.S. Govt. Printing Office, October 1970.

Although it may appear that Egypt has placed emphasis on large combatants, the fact is that she has simply retained the British destroyers and frigates acquired earlier while gladly accepting four aging Skory class destroyers from the U.S.S.R. The 48 torpedo boats on hand in 1960 have since been complimented with 22 missile and gunboats, thus rounding out the force.⁴⁰

⁴⁰Blackman, op. cit., 1960-61, pp. 137-139, 1975-76, pp. 102-105.

Table 5

EGYPT NOB 1960 - 1975

	DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960	2(3.5)38	1(1.9)18 1(2.2)18 1(1.5)26 1(1.3)16	2(.90)14	6(.53)18 8(.27)13	3(.07)19		2(.10)28 40(.05)42 6(.06)35	
1965	6(3.5)38 2(2.6)37	1(1.9)18 1(2.2)18 1(1.5)25 1(1.3)16	2(.90)14	6(.53)18 6(.27)13 2(.18)10	3(.07)19	3(.10)40	2(.10)28 36(.05)42 6(.06)35	3(.22)28
1970	6(3.5)38 2(2.6)31	1(1.9)18 1(2.2)18 1(1.5)25 1(1.3)16	2(.90)14	4(.53)18 2(.18)10		12(.20)35 8(.10)40	3(.15)40 36(.05)42 6(.06)35	8(.22)28
1975	4(3.5)35 1(2.6)31 1(2.2)18 1(1.5)25	1(1.9)20 1(2.2)18 1(1.5)25		6(.60)17 4(.50)18 2(.18)17		6(.20)32 4(.08)40	6(.16)41 24(.08)43 6(.06)36	12(.25)29

	Total #	Av. Size	Av. Speed
1960	73	.33	33
1975	80	.50	33

*key: number(size)speed = x(.xx)xx

size = tons tons X 1000

F. LIBYA

1. Political and Economic Structure

From 1951 until 1969, Libya was ruled as a monarchy under King Idris, who generally followed a pro-Western policy. Treaties were signed with Britain and the U.S. for economic aid in return for military base privileges. Although a member of the Arab League, her attitude was mainly conservative, despite urgings for alignment with Egypt. Under Nasser's call for expulsion of Westerners, the U.S. and Britain were forced to withdraw their forces.

In a bloodless coup d'etat in 1969, the King was deposed, the constitution abolished, and a new government under the Revolutionary Command Council formed. Colonel Mu'ammarr al-Qadhafi was named Commander-in-Chief of the Armed Forces and in 1970 became Prime Minister. The Qadhafi regime has turned in support of the other Arab States and in 1971, announced a tri-partite union with Egypt and Syria.

In 1959, oil was discovered and by 1967, revenues brought in 550 million dollars.⁴¹ Despite rapid urbanization, 75% of the country is engaged in agriculture. In 1970, the State took over industry and mining and selective investments in foreign enterprises have been made.

⁴¹Stockholm, op. cit., p. 587.

2. Strategic Considerations

Oil is the key to Libya's strategic importance as the North African fields reduce dependence on Middle Eastern sources for Western Europe. In 1971, Libya received highly favorable concessions from foreign oil companies after threats of nationalization were made, and production was expected to exceed two billion dollars by 1971. U.S. companies account for about 90% of production while Libya has formed her own national company.⁴² The closure of the Suez Canal had added immeasurably to the strategic importance of North African oil, and even with its re-opening in 1975, the size of the supertankers which many nations rely on will preclude their passage through the canal.

3. Defense Structure

As a result of the coup of 1969, Qadhafi became both Prime Minister and Defense Minister, and thus Commander-in-Chief of the armed forces. In 1972, the chief of staff was LtCol Abu Jahbir who also serves as Army commander and is directly reported to by the Air Force and Navy commanders.⁴³

⁴²Shimoni, op. cit., p. 283.

⁴³Nyrop, Richard F., and others, American University Area Handbook for Libya, 2nd ed., p. 269, U.S. Govt. Printing Office, 1973.

Army organization was patterned after the British, but has become heavily influenced by France and Egypt.

4. Force Composition

The navy was formed in 1962 and two inshore mine-sweepers were loaned by Britain to form the nucleus of the new force, and in the following nine years was to supply 18 more vessels, including a modern frigate, corvette, and logistics supply ship.⁴⁴ Significantly, three Susa class missile boats built by Vosper Limited were obtained in 1973 and are the first vessels to be armed with the Nord SS 12(M) missile. Similarly, the Frigate Dat Assawari is also armed with missiles, the British-built Seacat.

Thus, the Libyan Navy has seen rapid growth since its formation in 1962, but its battle efficiency remains suspect. Despite turning away from Western influence, the Navy still relies on British weapons, while the Air Force has acquired French and U.S. craft, and the Army Soviet tanks and amphibious vehicles. With her oil reserves and new-found friends among her Arab neighbors, it would seem likely that the armed forces will increase both in size and sophistication as training and technical expertise improve.

⁴⁴Blackman, op. cit., 1960-61, 1975-76.

Table 6

LIBYA NOB 1960 - 1975

	DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960								
1965			1(.44)18	2(.16)14				
1970		1(1.6)38	1(.50)18	2(.16)14	2(.10)18	3(.11)54		4(.10)24
1975		1(1.6)38	1(.50)18		4(.16)14 6(.10)18	3(.11)54		1(.08)23

	Total #	Av. Size	Av. Speed
1965	3	.25	15
1975	16	.23	25

*key: number(size)speed = x(.xx)xx

size = tons X 1000

G. TUNISIA

1. Political and Economic Structure

Tunisia won independence from France in 1956 under the leadership of Habib Bourguiba, who has been President since 1967. He is considered a moderate and is pro-Western in the conduct of foreign policy. Tunisia's failure to take a strong stand against Israel has caused friction with other Arab States but the June War of 1967 brought her back within the fold. Relations with Egypt have been cyclic as Bourguiba condemned Nasir's dictatorial attitudes toward the Arab League and his unacceptance of any responsibility for the June War defeat. Thus, Bourguiba is viewed with suspicion by his Arab neighbors because of his attempts to resolve the Israeli problem through more moderate means, and his expressed policies toward the West.

The Tunisian economy is agrarian although steel and iron production is adequate. Oil reserves should prove sufficient for domestic use. The presence of the French until 1962 had a favorable effect upon improving communications, transportation, and small craft industries.

2. Strategic Considerations

Physically, Tunisia is in strategic proximity to the Sicillian Straits, and once Bourguiba is no longer President,

a more radical leadership would increase the significance of Libya's adjacency to that waterway. Perhaps the Tunisian Navy will not in itself pose a serious threat, but control of the Strait by Tunisian-based forces would pose considerable problems, especially through the use of undersea forces, mine warfare, and shore-based anti-shipping weapons. But the continuation of the moderate attitudes of Bourguiba's successors would ensure the discontinuity of an aggressive or radically motivated North African Arab front.

3. Defense Structure

Bourguiba has deliberately attempted to minimize the role of the military in internal politics. Thus he has kept the army weak to prevent possible coups.⁴⁵ The military has been allowed to grow to levels adequate for domestic needs and to assist Arab causes, but not to the extent of over-commitment. The President is also Commander-in-Chief, while the Army Commander has authority over the Navy, which is an adjunct branch and thus subordinate.

4. Force Composition

The Navy was formed in 1959 as a component of the Army and had received little support until the early seventies.

⁴⁵Stockholm, op. cit., p. 594.

The Tunisian military under Bourguiba has played an important social role, both in providing manpower for civil work projects and in education of recruits.

The Tunisian Navy has a strong French orientation and most of the ships are French-built. Personnel in 1975 numbered about 2,100 and combatants 19, as opposed to one Corvette and one Fast Gunboat for the first ten years of operation. The Navy has shown a high growth rate (850%) in the seventies although past involvements in the Arab-Israeli conflicts would not warrant it. Yet, the navy is staffed with high quality officers, and a combination of Arab suspicion and French influence may have convinced the government of the need for a credible force at sea. The acquisition of three missile-armed P 48 class patrol boats constitutes a significant advance for Tunisian Naval capability.⁴⁶

⁴⁶Blackman, op. cit., 1960-61, 1975-76.

Table 7 TUNISIA NOB 1960 - 1975

	DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960			1(.92)20					1(.08)28
1965			1(.92)20					1(.08)28
1970			1(.92)20		1(.40)19	2(.25)20		4(.08)28 6(.04)23
1975		1(2.1)19	1(1.3)24 1(.44)19	1(.37)13		3(.25)20		4(.08)28 8(.04)23

	Total #	Av. Size	Av. Speed
1960	2	.5	24
1975	19	.3	23

*key: number(size)speed = x(.xx)xx

size = tons X 1000

H. ALGERIA

1. Political and Economic Structure

Algeria received independence from France in 1962 under the leadership of Muhammad Ben Bella. A coup d'etat in 1965 put Colonel Houari Boumedienne in charge as President of the Council of the Revolution. Ben Bella was considered by many as a "Nasirist" but soon began to take Algeria on an independent course. The coup was partially inspired by Ben Bella's apparent attempt to challenge Nasir for Arab leadership. However, the new government appears to be acceptable to the other Arab States, especially in view of the hard anti-Israel attitude.

Algeria began receiving Soviet arms in 1960, funneling them through Morocco, Tunisia, and the UAR to avoid direct confrontation with France, while arms received after 1963 were used in the Moroccan border dispute. Boumedienne's rise to power was heavily dependent on support from the armed forces and continues to conduct foreign policy in extremist fashion.

Algeria has significant oil and natural gas reserves, but until 1966, was heavily dependent on France for foreign trade. The area along the Moroccan border is rich in minerals but is in dispute as its limits are not well defined

and has been the object of numerous conflicts. The combination of oil production and foreign aid has enabled the maintenance of a relatively large military force to complement Boumedienne's extremist policies.

2. Strategic Considerations

Algeria, along with Morocco, occupies the southern approaches to the Gibraltar exit with approximately 100 nautical miles separating the naval base at Oran with the nearest point on the Spanish coast. Secondly, Soviet relations with Algeria provide a point of contact for the projection and influence of the Russian Mediterranean Fleet. An established military stronghold in Algeria would seriously jeopardize the security of NATO's southern flank. And finally, the extremist policies of the Algerian government provide a continuous source of tension and unrest among members of the Arab League and would-be Arab allies of the West.

3. Defense Structure

President Boumedienne is the commander-in-chief of the armed forces as well as Defense Minister. The National People's Army (ANP) represents the entire military establishment and is considered the most unified and representative institution in the national life.⁴⁷ It was Boumedienne's

⁴⁷Nyrop, Richard F., and others, American University Handbook for Algeria, p. 333, U.S. Govt. Printing Office, 1972.

goal to create a unified force, and the success of the ANP and its support of the President has promoted solidarity within the country.

4. Force Composition

The navy was formed in 1962 with two coastal mine-sweepers from Egypt composing its nucleus. Shortly thereafter, Soviet aid consisting of torpedo boats, sub-chasers, and missile patrol craft was received. The bulk of arms aid came between 1965 and 1967 while relations with the Soviets deteriorated after the June '67 War. It appears the Algerians were somewhat dismayed by Egyptian dependence on Soviet weapons, and in December 1967, it was reported that the Soviets refused to supply spare parts for the Algerian forces.⁴⁸

Due to Egyptian and Soviet arms deals, the Algerian Navy grew from two mine sweepers in 1962 to some 29 combatants in 1975, of which nine are missile-firing Komar and Osa patrol craft. This represents over 1000% growth in 13 years, and while the forces consist of minor combatants, the combined missile boats represent 24 Styx missiles, only one of which was required to severely cripple the Elath in 1967. As long as the Soviets continue relations with Algeria, this force must be given serious consideration in both the context of Arab affairs and East-West confrontations.

⁴⁸Stockholm, op. cit., p. 586.

Table 8

ALGERIA NOB 1960 - 1975

DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960							
1965			2(.30)13				
1970			1(.30)13		1(.20)35 8(.10)40		6(.25)28
1975			2(.61)17		3(.20)32 6(.10)40	12(.08)43	6(.25)28

	Total #	Av. Size	Av. Speed
1965	2	.30	13
1975	29	.30	37

*key: number(size)speed = x(.xx)xx

size = tons X 1000

I. MOROCCO

1. Political and Economic Structure

Morocco gained independence from France in 1956 and has been ruled by King Hassan II since that time. The government was initially passive regarding Arab affairs but in 1958 joined the Arab League. Clashes with Algeria made her wary of the radical left yet played host to the Casablanca Conference in 1961 which sought to unify African states. Morocco has remained friendly to the West but takes a neutral stand in inter-Arab affairs while following a hostile attitude toward Israel.

The Moroccan economy profitted from European presence as highways and public facilities were developed. Phosphate mining was begun along with coal, and domestic oil production supplies domestic needs. The mineral-rich mountains along the eastern border are yet to be exploited due to conflicting claims with Algeria.

2. Strategic Considerations

Morocco is the only Arab state bordering both the Atlantic and Mediterranean and shares with Spain the narrow neck of the Gibraltar Straits. Morocco's importance is easily realized as a counter to Algerian-based aggression, both in deterring sea-denial operations and limiting inter-Arab

hostilities. The neutralist attitudes of the present regime as well as favorable policies toward the West would facilitate development of Moroccan leadership in the Organization for African Unity and as a bastion against the spread of Soviet influence across North Africa. Yet the conservative stand in regard to radical leftists and the Israeli issue has given cause for internal disorder, thereby posing the most serious problem to the Monarchy.

3. Defense Structure

The King is Chief of the General Staff and Supreme Commander of the Armed Forces and makes appointments such as Army Chief of Staff and Minister of Defense. The army is the principal service as is the case with most of the Arab states. The military forces are the largest single disciplined group within the country and perform many public services, thereby gaining a degree of prestige and respect among the populace. The navy and air force have received minimal emphasis and would hardly deter a sustained attack. Two attempted coups by military officers have resulted in a scarcity of good leadership within the military, thus further weakening an already questionable defense force.

4. Force Composition

Morocco has relied principally on the U.S., France, and the U.S.S.R. for military aid. In the early sixties,

the U.S. and the Soviet Union competed in arms shipments, with the Soviets temporarily abstaining during the Algerian border clashes. French aid came mostly in the period immediately after independence although the entire composition of the navy today is of French origin.

The navy was formed in 1960 as a branch of the army with the arrival from France of an ex-U.S. sub chaser. There has been a gradual build-up of the navy since that time with emphasis on the fast patrol craft, although the navy's flagship is a 2,150 ton frigate of British origin. According to Jane's 1975-76, the Moroccans have several more patrol craft on order from France.⁴⁹ In that the French are leading builders of these craft as well as exporters of the Otomat and Exocet anti-shipping missiles, it would seem likely that the Moroccan Navy would receive vessels with a missile-firing capability. In fact, the two Corvettes currently on hand and the two on order are possible candidates for missile retro-fit, and are reported to be actually armed with Exocet.⁵⁰ This data does not appear in the primary source literature for this study and therefore was not included in the following graph for Morocco.

⁴⁹Blackman, op. cit., 1975-76, p. 242.

⁵⁰Boehe, Rolf, "Modern Fast Patrol Boats," International Defense Review, v. 7, no. 6, p. 740, Interavia, Dec 1974.

Table 9

MOROCCO NOB 1960 - 1975

	DES	FRI	COR	MIN	PAT	FPM	FPT	FPG
1960					1(.40)20			
1965		1(2.2)18	1(.92)20		1(.40)20 1(.37)19			1(.08)28
1970		1(2.2)18			1(.37)19			1(.08)28 1(.15)25
1975		1(2.2)18	2(.44)28	1(.42)15	1(.64)8			1(.08)28 1(.15)25

	Total #	Av. Size	Av. Speed
1960	1	.40	20
1975	7	.62	21

*key: number(size)speed = x(.xx)xx

size = tons X 1000

J. OVERALL TRENDS.

1. Overall Average Size (Figure 1)

In 1960, displacement of combatants ranged from two Egyptian destroyers (ex-Soviet Skoryi class) at 3,500 tons to three Lebanese patrol boats at 28 tons. Although 28 tons is extremely small, it is significant to point out that these three craft represent three-fourths of the entire naval force of that country. Displacement average at this time is 370 tons with 74% of the total 112 craft being patrol vessels.

In 1965 there was a small increase in average size to 410 tons as the percentage of patrol craft decreased to 72% and destroyer totals increased from six to ten. Also, Algeria, Libya, and Syria acquired six mine warfare craft between them. By 1970, patrol craft comprised 85% of the total of 211 combatants with Fast Patrol Missile (FPM) making the largest gain, three in 1965 to 52 in 1970.

In 1975, patrol craft still represent 85% of the total which has by now increased to 236 units. Again, it must be pointed out that this total is only for the vessels as described for this study. There are numerous other craft, assault, supply, auxiliary, etc. that are not mentioned. Further, many craft were either too small or were under construction or on order and thus were also excluded.

2. Overall Average Speed (Figure 1)

Average speed in 1960 was 31 knots, the lowest category being mine warfare craft at 15 knots and the highest being torpedo boats at 40 knots. By 1965, the average speed has held fairly steady as the percentage of patrol craft changed by only 2%. Five years later, average speed increased to 34 knots as the large increase in Fast Patrol Missile boats brought the speed up. Finally, by 1975, the average speed has shown a slight decrease as the number of somewhat slower FPGs increased as did the PAT category.

It would appear that given the size constraints and operating conditions of the Mediterranean, the planing-hull design of these craft has reached the maximum speed for the amount of powerplant that can be installed. Most of the craft in this study incorporate either diesel or gas turbine engines and in some cases, a combination of the two. Yet no country examined here has acquired hydrofoil craft as has the Italian Navy, nor have the so-called surface effect ships made an appearance, although operating conditions are conducive to both types. The greater stability of the hydrofoil is especially suited to missile launch requirements but the higher costs of these craft make them less attractive to the already-proven planing hulls.

3. Average Speed and Size Comparisons (Figure 2)

The fifteen year period has seen a slight but gradual increase in the size of patrol craft while vessels in the "Other" category showed a large increase in 1970 and then returning to the average of 1,300 tons in 1975. The most contributing factor in the size reduction was due to Egypt's loss of two Skory's and Israel's deletion of her two destroyers as she became more patrol boat oriented.

The difference in speed between the two categories, Patrol and Other, has held at about 15 knots, although the past few years have seen the differential at about 13 knots. The smaller patrol craft, those at about 100 tons, are particularly high speed, usually above 40 knots. For example, Libya's Susa class missile boats displace 114 tons and have a top speed of 54 knots. Those craft in the 400 to 500 ton class such as Israel's new Reshef class boat generally tend to be five to ten knots slower.

4. Cumulative Total Comparison (Figure 3)

In 1960, the total number of craft of all nine countries was 112, 74% of which were patrol boats. In five years, patrol units increased by 28% while "Other" increased by 45%. The two categories having the greatest increases were mine warfare and patrol gunboat. In the early sixties,

the formation of new navies often began with the acquisition of several second-hand mine sweepers or a half dozen fast gunboats. By 1970, patrol craft increased by 68% while "Other" decreased by 32%. The two significant factors during this period are Soviet aid to Syria, Egypt, and Algeria, and the 1967 War which caused the loss of a great deal of equipment. Also at this time, Israel had reacted to the Komar missile boats introduced by the Soviets and by 1968 had Saar units operational.

Finally, by 1975, patrol craft increased by 13% while "Other" units made an identical advance. Total units at this time number 201 in the Patrol category and 35 in the "Other." The overall rate of increase for patrol craft from 1960 to 1975 is about 70% while for the same period, "Other" had a 21% rate of increase. These figures are intended only to give an appreciation of the trends of naval development in the region. The exact figures will vary slightly depending upon how the classes are grouped, which classes are excluded and which are simply discounted.

Figure 4 indicates the relative percentage of patrol craft to "Other" for the entire period. The most significant change occurs between 1965 and 1970, which, as has been mentioned, is the period of greatest military aid and/or

arms purchases as well as combat losses. Now that all the countries have a navy established, it would seem that the period from 1975 to 1980 will see a continuing growth both in numbers and in sophistication of armaments. Due to the rather limited manpower resources of many of the smaller countries such as Lebanon and Tunisia, these navies will probably peak out sooner than a country such as Syria or Libya. Depending upon political constraints and economic factors, each navy will increase to the point that foreign and domestic objectives will be achieved and the security and balance of power in the region will be maintained. Certainly this will not be a static level as local conflicts, super power interests, and economic developments will impose their effects upon the entire area.

Most significantly, the patrol boat has given the navies of the Mediterranean a naval voice. The U.S. and Soviet Union have operated their respective fleets with little regard for the naval forces of the southern and eastern littoral region. The missions of projection and presence will have to be re-examined in the light of a changing picture as perceptions of threat and coercion, victim and assailant, are surely being altered. The growing inability of the super powers to control the Middle East conflicts as well as

emerging economic independence of the oil-rich Arab States has created an atmosphere necessitating strong armed forces just to keep current with local developments. The wave of Arab nationalism required that member nations have the capability to act in their own behalf without the approval of foreign interests. In this regard, a visible naval force for the purposes of diplomatic persuasion can be achieved with even an all-patrol boat navy such as that of Israel.

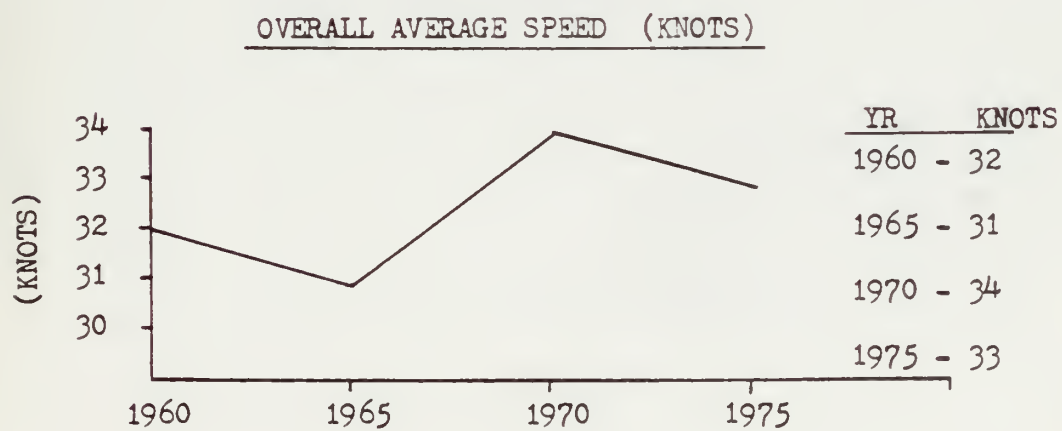
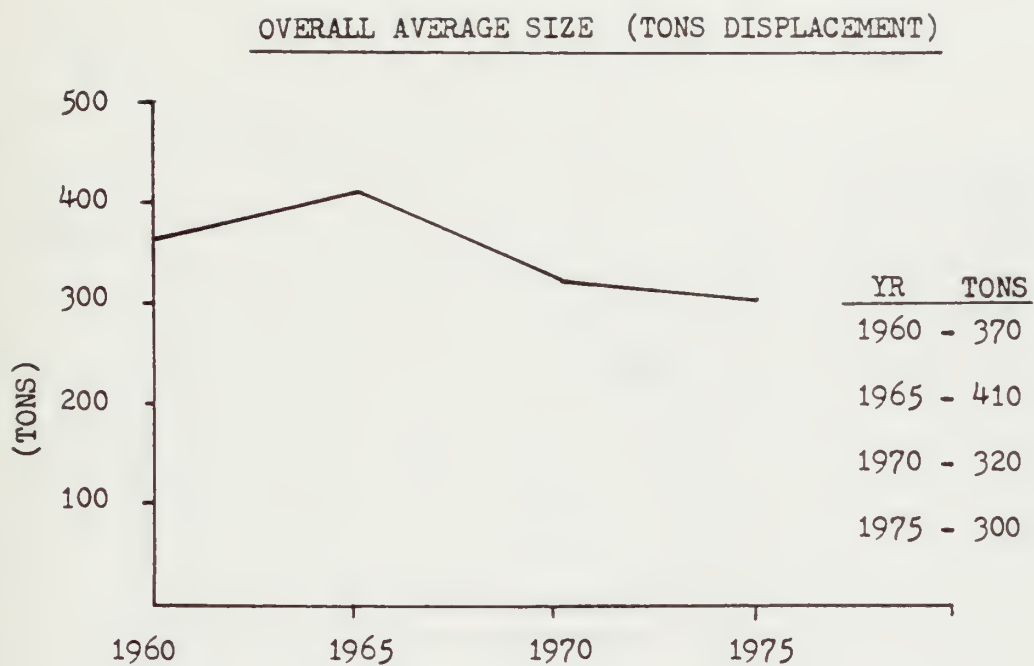
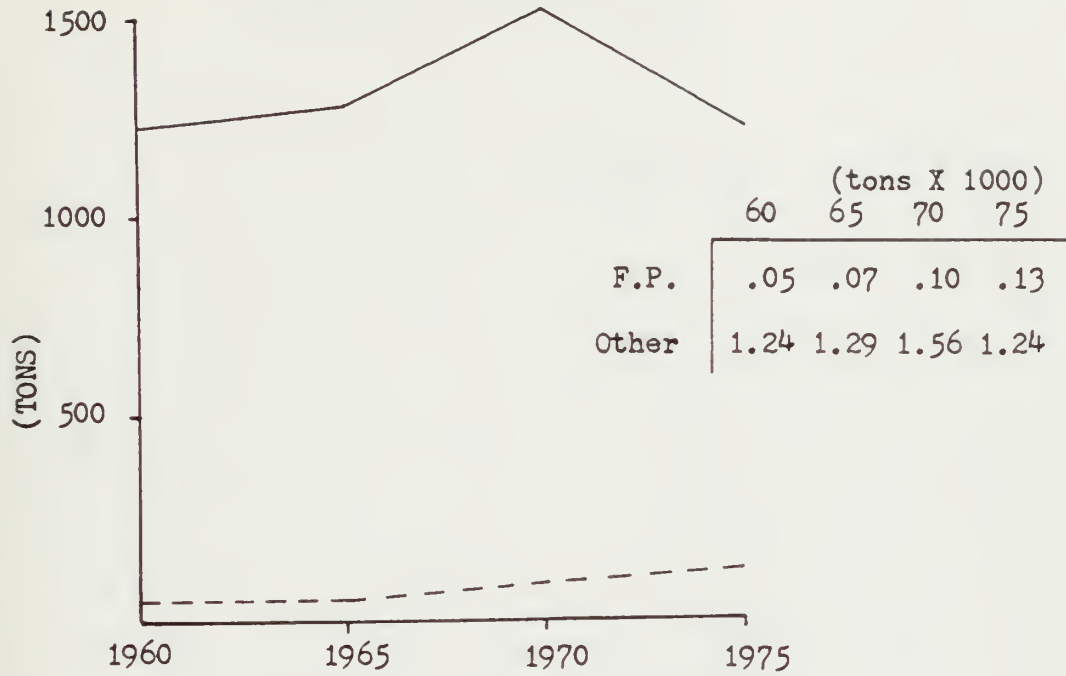


Figure 1

AVERAGE SIZE COMPARISON



FAST PATROL: - - - - -

OTHER: —————

AVERAGE SPEED COMPARISON

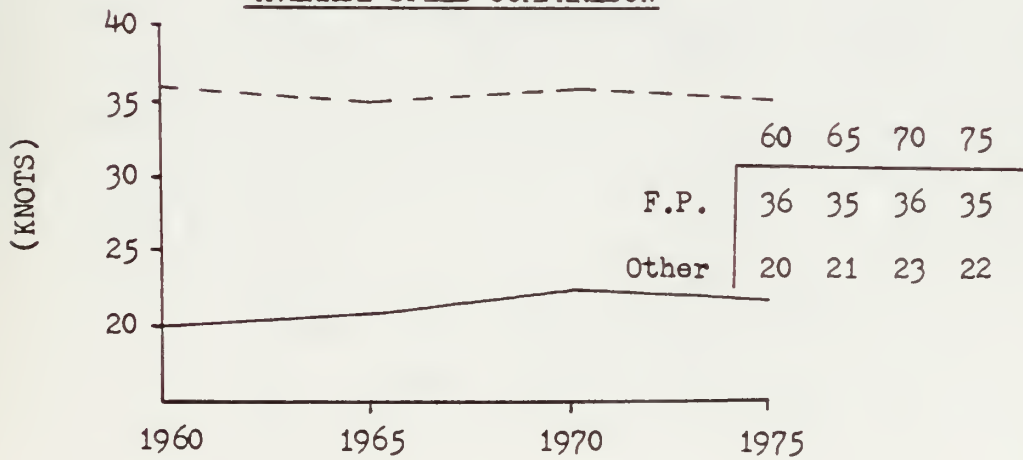
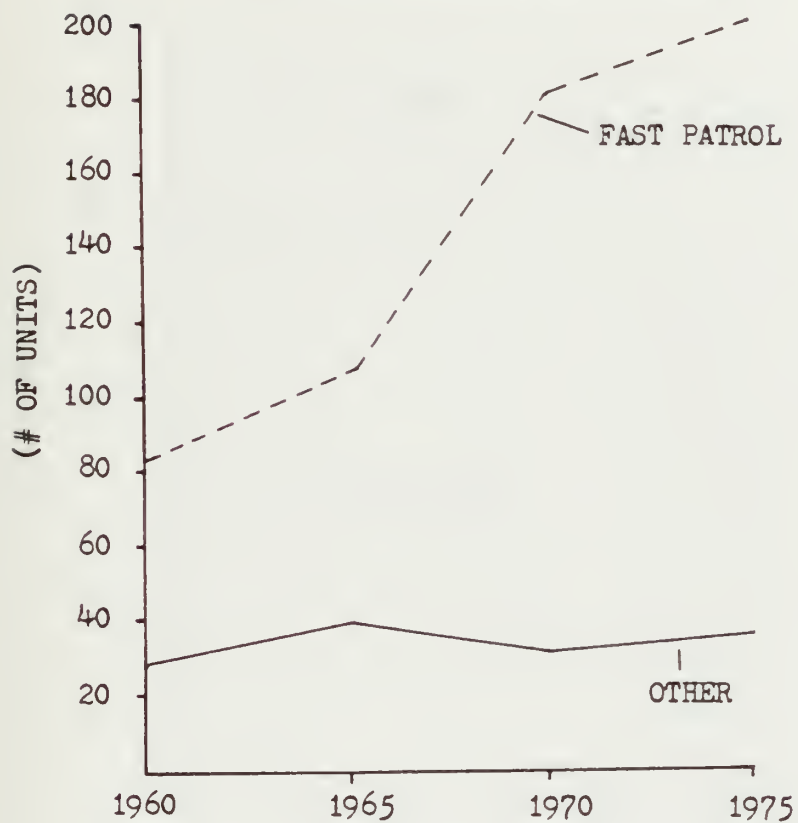


Figure 2

CUMULATIVE TOTAL COMPARISON



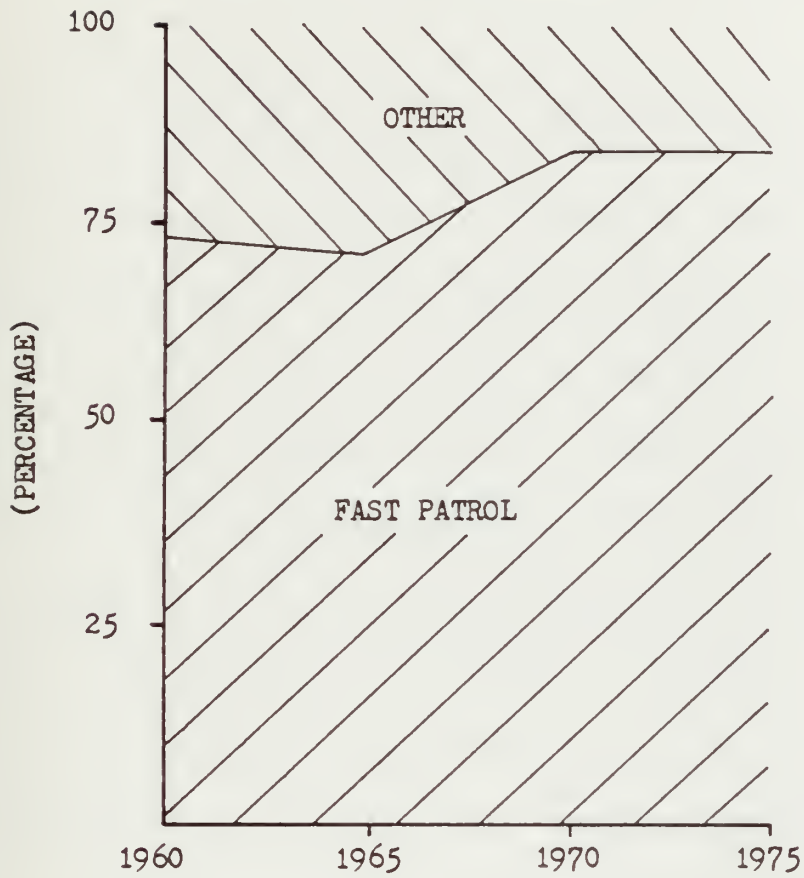
	1960	1965	1970	1975
FAST PATROL	83	106	180	201
OTHER	29	41	31	35

Fast Patrol: PAT, FPM, FPT, FPG

Other: DES, FRI, COR, MIN

Figure 3

FAST PATROL AS A PERCENTAGE OF TOTAL



	1960	1965	1970	1975
FAST PATROL	74	72	85	85
OTHER	26	28	15	15

(percentage)

Figure 4

IV. FACTORS WHICH INFLUENCED NAVAL DEVELOPMENT

For the greater part of the twentieth century, the history of the Middle East has revolved around two general pivotal factors: foreign intervention and internal unrest. In the first part of this century, Allied strategies sought to control and eliminate Axis encroachments in North Africa and secure the Turkish Straits. Since the end of the Second World War, the expansion of Soviet interest and the U.S. opposition to it have driven these two powers on a collision course that has yet to be avoided. Recently-developed economic potentials have attracted the attention of a bevy of international merchants all seeking favorable trading status, some for commercial gain, others for political advantage or both.

In addition to the economic and political pressures from without, the very same pressures have manifestly operated from within. For all the questionable virtues of colonialism, there is concomitantly a degree of economic stability. Thus, with the emergence of Arab independence by the 1950's, there emerged as well the need for survival in a competitive environment. To add the final ingredient, the turmoil of political unrest resulting from the creation of the Jewish

State in 1948 has kept the Middle East in the forefront for maximum exploitation and diplomatic intrigue. It is in this light that the factors influencing the development of naval forces in the Mediterranean will be examined. Arab Independence, the Dispute with Israel, and Foreign Power Interests were all interrelated in creating a need for military forces. Some observers have pointed out the minimal role played by naval forces in what have essentially been land wars between small non-maritime nations. This is indeed true, but as the sixties have shown, the naval components of most of the subject countries were under the army and thus played limited roles in combat. But the 1973 Yom Kippur War demonstrated the feasibility of naval weapon's use, weapons that would not have been used were they not supplied by outside interests. And finally, it has been shown that the value of naval weapons lies as much in their capacity to influence action and thought as in their ability to conduct military operations upon the sea. As soon as the Soviets supplied missile boats to Syria, Egypt, and Algeria, it became necessary for the Western States to restore that naval balance by similarly aiding Israel.

A. ARAB INDEPENDENCE

British influence in Egypt began in the late nineteenth century and ended with the ill-conceived Suez crisis of 1956. Similarly, British hegemony over Palestine lasted until 1948 although the complexities of the Arab-Zionist dispute precluded the establishment of an effective governing institution. French interest in Algeria, Morocco and Tunisia was in part motivated out of need for recruitment for military service in support of policies for consolidation of power in North Africa. In the East, the French established military administrations in Syria and Lebanon in the early twenties in defense of the Levant. Libya received the attentions of Facist Italy and supplied two divisions of men at the outbreak of war in 1940.

With the defeat of France, Britain sought to mobilize her dependencies in the Middle East for the war effort. Meanwhile, Palestinian Nationalists feared a British victory would be detrimental to the cause of Arab nationalism and thus opposed the British war effort. In Egypt, a mutual distrust kept the Egyptian government from sympathy with England's troubles, resulting in little or no modernization of the Egyptian Army.

The French mandated Syria and Lebanon to Britain but kept her holdings in North Africa for the War's duration, although Libya came under British administration. In 1945-46, Stalin attempted to expand his holdings by seizing the Turkish Straits, but his gamble failed. The United States countered by offering to uphold the security of the states beyond Russian dominance via the "Truman Doctrine." In turn, the Soviets attempted to push France and England completely out of the Middle East by supporting any nationalist movement calling for the ouster of the two powers. But Soviet thrusts into Middle East politics only strengthened American resolve in the area and thus caused her to become more committed.

This concern for containing the Soviet outward movement led to the creation of the "Northern Tier" strategy designed to provide a physical barrier to communism's spread. It might be argued today that the strategy has failed because the Soviets leap-frogged the Tier into Syria and Egypt. However, despite some Soviet advances in the area, she still has no permanent bases or installations of any kind, witness her embarrassing setback in Egypt in 1972 after pouring tremendous amounts of aid into that country. Witness too the recent failures of the Arab efforts against Israel utilizing Russian equipment and services.

Thus, the continued presence of foreign forces on Arab soil following the end of World War II only added to the frustrated attempts toward nationalism. Colonial rule had long been a painful awareness among Arabs, and the need to establish an Arab national identity was instrumental in the move toward independence. One by one, the individual states demanded independence and received it. But strongly differing opinions and priorities stood in the way of Arab unity, especially in terms of resolving the Israeli issue and leadership of the Arab Union itself. Independence immediately produced recognition of the need for arms produced and supplied from abroad, as none of the Arab States was self-sufficient in weapons production.

Fortunately for the Soviets, the early fifties found them in a position to support the Arab cause and therefore strengthen their own position through the supply of arms. And so it has been for over two decades that the creation of independent Arab States gave the Soviets a needed foothold in the area. What is not so certain is why the Soviets supplied missile gunboats to Egypt, Algeria and Syria throughout the decade of the sixties when all indications seemed to point to a land-air limited conflict arena. But supply them they did and the pattern was thus firmly established.

B. THE ARAB-ISRAELI DISPUTE

The intense hostility of the Arab States for Israel has had a profound effect upon the military balance in the Middle East in two dramatic ways. First and foremost, the conflict has emphasized the need for armaments. Out of this need has come the complimentary factor: that of providing the opportunity for foreign intervention via the supplying of the needed arms. To be sure, the dispute has further roots. The displacement of Arab Palestinians, the disunity brought to the Arab cause as a result of the Jewish State, and the humiliating losses at the hands of the Israelis have all added to the problem. But the immediate result has been the use of weapons and the commitments thereby created between supplier and client.

Since the early 50's, Israel has relied heavily on arms support from the West, particularly the United States, France, and the United Kingdom. The U.S.S.R. soon became convinced that there was little advantage in supporting Israel since the seeds of revolution would not have taken hold within the strongly established state. The Soviets recognized early the benefit to be gained by supporting the Arab cause. It offered the opportunity to undermine Western interests while at the same time establishing their own reputation of

protective benevolence. The Soviets had much to gain by contributing to the hostilities that gripped the area. By supporting the Arabs, they could become firmly entrenched both politically and militarily, and thus weaken traditional Western ties. But also, if Arab strength wavered or was overcome, they would be in a position to replace losses such as occurred with Egypt after the disastrous June war in 1967. In six days, a significant portion of Egypt's military arsenal was destroyed whereupon she demanded resupply from her Soviet benefactor. By the end of 1968, massive aid had replaced weapons lost in the war. Some 39 Osa and Komar missile boats had been provided to Syria, Egypt, and Algeria and thus had set the scene for the sinking of the Elath.

The loss of the Elath was not only a personal tragedy to the Israelis, but was also a sobering event after the exhilarating victory of a few months earlier. Despite being outnumbered four to one, the Israeli Navy had good success harrassing Egyptian forces and preventing coastal assault by amphibious units. A small surface force created havoc in a raid on Port Said while frogmen teams damaged several ships in the port of Alexandria. The post-1967 period saw the Soviets provide Egypt with a great number of amphibious

units, which to the surprise of many, were not used to support the canal crossing in October of 1973.

Israel was faced with the prospect of guarding a coastline that had doubled in length, while at the same time contending with a growing Soviet Naval threat as well as Syrian and Egyptian surface forces. Just prior to the June War, the French had begun work on a new Israeli patrol craft, the Saar, but had held up delivery as a result of the war. While Israeli crews were training on the vessels in French waters in 1969, seven of the craft were sailed to Israel. Five more were sold to a fictitious Scandinavian fishing company and subsequently turned up among their sister ships in the Eastern Mediterranean.

The Gabriel anti-shipping missile is of Israeli design and was to have been incorporated into the first Saars, but the associated equipment was not ready. The overall concept of a new weapons platform and delivery vehicle was envisaged as early as 1961 and the design for the Saar was made by Fr. Lurssen of Germany.⁵¹ The first twelve craft were finally outfitted with Gabriels, guns (46mm or 76mm), ASW torpedoes and sonar. In 1968, the Saar 4 underwent domestic production and two of these craft saw distinguished service in the

⁵¹Erell, op. cit., p. 116.

October War. In March 1974, they then transitted around the tip of Africa and became the nucleus of the Red Sea Force. This move was necessitated by the Egyptian blocking of the straits of Bab-el-Mandeb with a destroyer and a submarine, thus preventing Israeli ships from re-supplying Haifa. In a longer war, this could have meant the loss of Sharm-es-Sheikh commanding the Gulf of Aqaba. This was probably the single most effective operation by the Egyptian Navy of the entire war, because in the Mediterranean the Saar boats were clearly superior to the Osa and Komar units.

On the night of 6 October 1973, Saar boats swept along the Syrian and Egyptian coasts, sinking three Osas, a PT Boat, and a minesweeper off Latakia. The Egyptians lost four Osas in the first two nights of battle and soon began the tactic of launching their Styx missiles at maximum range and then immediately returning to port before the shorter ranged Gabriels could be put to use. Altogether, ten Osa and Komar craft were sunk along with several other types of Egyptian and Syrian units without any losses by the Saars.⁵² After the initial encounters, the Egyptian and Syrian patrol craft simply remained in port and the Israeli craft commenced strafing raids along the coasts. Also, the Saars performed

⁵²Ibid., p. 118.

escort duties ranging hundreds of miles from base and on occasion refueled at sea. Thus the fast patrol craft of the Israeli Navy denied Syria and Egypt an important element necessary to the conduct of war as stipulated by Admiral Mahan: control of one's coast to prevent the enemy from blockading and bombarding.⁵³

Unfortunately, Israel suffered such a blockade by the Egyptians at the Bab-el-Mandeb Strait, but the effects never had the chance to materialize. In a different blockade attempt during the 1971 Indo-Pakistani War, Indian Osa missile boats were used to sink several Pakistani warships near Karachi Harbor. Later, a single Styx hit an oil tank and another sank a British Merchantman. Indian forces so well bottled up the Pakistani Navy that units were reported to have taken refuge among merchant ships in the harbor.⁵⁴ Within the first 48 hours of hostilities, the Pakistani Navy had been neutralized. The Osas particularly had negated any naval offensive by limiting the Pakistani forces to that of defending Karachi Harbor. Although possessing an aircraft

⁵³Mahan, op. cit., p. 129.

⁵⁴Kaul, LCDR Ravi, "The Indo-Pakistani War and the Changing Balance of Power in the Indian Ocean," U.S. Naval Institute Proceedings, Naval Review 1973, p. 190, 1973.

carrier, a cruiser, and destroyers, the brunt of Indian attack was borne by the Osas with extremely effective results.

One final aspect of the super power rivalry as it relates to the Arab-Israeli conflict concerns the seeming mutual negation of influence resulting out of the concern to avoid direct confrontation and conflict escalation. Despite the stated objectives of the U.S. and U.S.S.R. to support their respective client's interests, it is still the ultimate goal of avoiding miscalculation that brings caution and discretion into the conduct of policy and strategy. Thus the Arab States as well as Israel must accept certain preconditions when estimating the degree of support they might expect.

As mentioned earlier, the Kremlin used the "hotline" at the outset of the June War to seek minimum bilateral participation in that conflict, thereby negating the full effect either super power could have applied to the situation to the advantage of the warring parties. Actually, the primary roles of the U.S. and Soviets became one of controlling the conflict to the extent that neither side won or lost completely, but rather spent themselves in a spasmodic attempt to restore equilibrium. In the Yom Kippur War of 1973, the Soviets demanded that the U.S. require the Israelis to withdraw to their positions of 22 October and relieve the threat to the

Egyptian Third Army. When the U.S. went on world-wide alert, the Soviets backed down while finally accepting a U.N. Force to end the crisis.⁵⁵

Although the Israelis did not withdraw to the earlier positions, they were in fact denied a significant military victory. Similarly, the Egyptians were not provided the backing of their Russian supporters due to the U.S. alert and the danger of escalation. It would therefore appear that a peculiar dilemma had been created in that weapons were adequately supplied but neither side could win a decisive victory and intervention on the part of the super powers was a function of their own mutual consent. For the countries involved in the struggle, the need for arms is obvious as long as bipolarity exists and the interests of the super powers are served through policies of controlled tensions and preservation of the status quo.

C. FOREIGN POWER INTERESTS

The interests of foreign powers in the Middle East can be divided into two distinct areas: those interests which are self-serving, and those which serve the Middle East. Despite the overwhelming presence of the United States and

⁵⁵Strategic Survey 1973, The International Institute for Strategic Studies, 1974, p. 30.

Soviet forces in the Mediterranean region, it must be remembered that they are the foreigners whose presence has been and will continue to be maintained with or without local approval. As long as the factors of strategic deterrence and oil dependence prevail, the two super powers will have a vested interest in the area, European concern notwithstanding.

The self-serving interests of the U.S. and U.S.S.R. are opposite in intent but somewhat similar in application. When the United States first established a permanent presence in the Middle East in 1947, the initial intent was to contain the Soviet Union and to fill the power vacuum caused by the decline of British and French power after the war.⁵⁶ Secondly, the U.S. sought to protect vital Western interests which for the most part had to do with securing the free flow of oil as well as providing military bases from which a credible deterrent could be brought to bear. In her role as the guarantor of peace and stability in the Middle East, the greatest challenge faced by the U.S. has not come from any direct Soviet confrontation, but from Russian exploitation of militant Arab Nationalism and its attendant instability.⁵⁷

⁵⁶Cottrell, Alvin J. and Joshua, Wynfred, "The United States-Soviet Strategic Balance in the Mediterranean," Brassey's Defense Yearbook, p. 87, W. Clowes & Sons Limited, London, 1974.

⁵⁷Ibid., p. 87.

The ill-fated Anglo-French intervention in Suez in 1956 essentially ended all significant European presence in the area with the slack being taken up by the U.S. However, after the six day war in June 1967, even the Pax Americana began to decline as the burden became too great to be borne alone.⁵⁸

The Soviet Union had long sought to end the Western hegemony as well as expand her own sphere of influence to the south. As such, she set as a minimum goal the ending of the Western monopoly and the changing of the political climate toward one of a more neutralist orientation.⁵⁹ Also, the oil routes of the Middle East have caught the attention of the Soviets as well. Their role in the Arab State's use of oil as a political tool certainly suggests their awareness of Western dependence on petroleum. Finally, an end to Western military domination of the Mediterranean would not only remove a thorn from the Soviet southern side, but would enable the outflanking of NATO from the South. This would in part be facilitated due to an already diminished European Naval force in the area as witnessed by the

⁵⁸The U.S.S.R. and the Middle East, edited by Michael Confino and Shimon Shamir, p. 156, Israel Universities Press, 1973.

⁵⁹Cottrell, op. cit., p. 88.

departure of French units in the face of the Soviet naval buildup.⁶⁰

The application of Soviet foreign policy since the mid-fifties has been one of polarization through exacerbation of the Arab-Israeli dispute with herself as the sole supporter of Arab interests against U.S.-Israel aggression. Similarly, the United States has also approached the Middle East situation within the context of the dispute with Israel but the aim has been toward resolution of the conflict and anti-polarization of the Arab States. The politics of controlled tension have served the Soviets well although two major wars in six years have brought the two super powers dangerously close to confrontation.

In serving Middle East interests, the United States, as already mentioned, sought to fill the political vacuum of the Anglo-French withdrawal. To do so, she not only interposed her own forces, but began an aid program to those allies, notably Israel, Tunisia, Morocco, and Lebanon, who had not become overly committed to the Radical Arab cause or communist influence. By providing these states with arms, it not only precluded them from turning to the Soviets as many others did, but guaranteed the protection of the U.S.

⁶⁰Hager, Wolfgang, "The Mediterranean: A European Mare Nostrum," Orbis, p. 248, Foreign Policy Research Institute, Spring, 1974.

from foreign intervention. The Soviets likewise used military aid as the bargaining tool to gain Arab confidence and defend against U.S.-led encroachment. In so doing, the Soviets greatly furthered their goals of ending the Western monopoly and altering the political climate through the exploitation of the move for nationalism and the conflict with Israel.

For the super powers, the Middle East rivalry is only one facet of the global competition in which they are both engaged, although the Soviets have a more direct and vital concern for the Mediterranean strategic balance. Similarly, Europe has an extremely important stake in the area, both militarily and economically. She is as strong as the Soviet Union in economic potential, and the combined NATO forces are of immediate concern to Soviet military planners. Yet it is Europe's resistance to unity, first by Britain and then by de Gaulle that her influence has become virtually nil, and nowhere is this weakness more significant than in the oil-rich Middle East.⁶¹ It has been in the arms race arena that countries such as West Germany, France, Britain, Sweden, and Yugoslavia have sought to regain a measure of interest if only to win new customers for needed weapons.

⁶¹Laquer, Walter, The Struggle for the Middle East, p. 190, The Macmillan Company, 1969.

A final factor contributing to the arms build-up in the Middle East has been the tremendous revenues made available through the greatly increased price of oil. Iran, for example, ordered \$2.5 billion dollars in arms from the United States in 1972 in what appears to be an attempt to dominate the Persian Gulf.⁶² Saudi Arabia has threatened to curtail oil production to the West if the U.S. does not develop more favorable policies toward the Arab cause. Thus, not only have the Arab States gained the wealth to purchase weapons, but they are gradually assuming control over arms purchases to the Middle East, a control long assumed to lie with the industrial nations. The politics of arms transfer and the leverage it provides may eventually be denied even the super powers as nations in economic straits such as Britain will be forced to sell weapons despite the dictates of prudent security interests. Middle East control of the arms trade along with diminishing super power control of their warring proteges has placed mounting pressure on the establishment of credible forces, be they naval, land, or air, while the emergence of a buyer's market has found no short supply of eager sellers.

⁶²Duchene, Francois, "The Arms Trade and the Middle East," The Political Quarterly, p. 461, The Political Quarterly Publishing Co., October-December 1973.

V. CONCLUSION

A. SUMMARY OF THE STUDY

It has been the intent of this study to describe the evolution of the naval forces of selected countries of the southern and eastern Mediterranean with emphasis on the degree to which patrol craft have become a part of those forces. Secondly, the study examined various factors that would explain the need as well as the direction of that development. Finally, this concluding chapter will present several speculative considerations involving future uses and implications regarding fast patrol craft and the anti-shiping missile.

Although the sinking of the Elath by the Styx missile is generally regarded as a turning point in naval weaponry in the Mediterranean, the existence of missile patrol craft dates back to the early sixties when Soviet-supplied Komars were operated by Egypt, to be followed in 1967 by Algeria and Syria. The Elath incident was conclusive proof that the naval threat to Israel was real, whereupon she began an immediate transformation of her navy to smaller and faster craft. In early 1968, the first French-built Saars began

to arrive and were to be equipped with Israeli-developed Gabriel missiles.

Libya and Tunisia acquired missile boats in 1968 and 1970 respectively and by 1975 approximately 58 missile-armed units were being operated by the six countries. This represents a total of well over 250 missiles from the littoral States alone, and this figure does not include any of the navies of the northern Mediterranean. As earlier indicated, for the purposes of consistency as well as classification, all data was extracted from Jane's Fighting Ships although other sources would indicate slightly differing numbers of units. Additionally, certain sources indicate proposed future acquisitions of patrol vessels which were not reflected in Jane's. This data, however, only serves to verify and further illustrate the significance of the findings of this study.

The fifteen year period from 1960-1975 revealed a trend of increasing reliance on patrol craft. In 1960, these vessels constituted 74% of the total units of all the countries of the study, and in 1975 had risen to 85%. In actual numbers, this represents 201 Fast Patrol craft versus 35 "Other" craft in 1975, as opposed to 83 and 29 respectively in 1960, of which none were missile-equipped.

A country-by-country comparison was made in which the factors of politics, economics, strategic considerations, defense structure, and force composition were presented. Generally, it was found that those countries closely allied with the Soviet Union or the Arab cause were well prepared to engage in open conflict with some degree of confidence of victory. However, the more Western oriented states such as Lebanon, Cyprus, Morocco and Tunisia were found to be less capable of even self defense due to a more moderate government or a less military-influenced regime. Israel fits neither case although her military capabilities are quite evident. She has acquired the capability to manufacture or maintain most of her own equipment and thus avoids the dependence on the Soviet Union for maintenance services as discovered by many of her antagonists.

Three factors were offered that are considered to be of principal import in influencing the need for arms among the Middle East nations: Arab Independence, the Arab-Israeli Dispute, and Foreign Power Interests. The withdrawal of European presence introduced the need for economic survival and military support. The combination of Arab Nationalism and the creation of the Jewish State created an arena of hostility which placed great emphasis on the need and

implementation of arms. The Soviet Union was quick to champion the Arab cause and supply her clients with whatever equipment seemed necessary to destroy Israel and dispel Western influence in the area. The United States sought to fill the vacuum created by the withdrawal of France and Britain as well as oppose the Soviet advance throughout the Mediterranean. The common denominator of both superpower's policies was the transfer of arms to eager recipients. The U.S.S.R. attempted to gain Arab support through military aid as well as instigate polarization of the region by exacerbation of the conflict with Israel. The U.S. on the other hand offered arms in an attempt to prevent states from turning to the Soviets. Despite the rival interests of the super powers in arming their respective proteges, their agreed upon and overriding concern has been the avoidance of direct confrontation. This has led to what many perceive as a form of strategic parity by which neither power will fully support a client at the risk of war. This stalemate has further underscored the need for individual states to be self-reliant in terms of military strength. A final factor pertaining to naval development has been the huge revenues brought in by Middle East and North African oil. This factor has not only meant that forces can now be bought outright without binding

commitment, but that control of the arms race is shifting to the Arab countries such as Saudi Arabia who is reputed to have financed efforts against Israel. With many European economies sagging, and the dependence on oil only too real, it can be reasonably assumed that the flow of arms into the Mediterranean region will continue unabated, thereby undermining the strategies and foreign policy interests of the rival super powers and presenting future complexities surpassing those of the present.

B. IMPLICATIONS FOR THE FUTURE

The most immediate concern of naval observers is the marked proliferation of missile-firing patrol craft worldwide. The proven combat effectiveness of these weapons has been amply demonstrated and their relatively inexpensive price tag and low operating costs have made them especially attractive to many of the small emerging navies. As early as 1973, over thirty countries were operating or had ordered missile patrol boats.⁶³ Significantly, many of these countries lie in close proximity to the strategic waterways of the world's trading routes, countries such as Cuba, Morocco,

⁶²Baker, Arthur Davidson III, "Small Combatants 1972-1973," U.S. Naval Institute Proceedings Naval Review, 1972 and 1973.

Tunisia, Egypt, Israel, Syria, Denmark, Sweden, India, Iran, Iraq, Maylasia, and Indonesia.

In many cases, there are only two or three of these craft in operation for a given country, yet the multiplicity of launchers per vessel and quick turn around time offers a credible threat to ships of all sizes. In the absence of air attack, a fleet of fast missile boats presents as great a hazard to shipping or potential adversaries as the traditional fleets of battleships and destroyers. Iran in particular has shown intentions of asserting her influence throughout the Persian Gulf and beyond the Straits of Hormuz into the Indian Ocean.⁶⁴ To help accomplish this mission, she has ordered a dozen "La Combattante II" class patrol boats equipped with "Exocet" missiles. These craft are ideally suited for operations in an environment such as the Persian Gulf and should provide an adequate counterpart to Iraq's Soviet-built Osa missile boats.

In 1967, Maylasia was in a position similar to Israel's as she faced the threat of Indonesian Komar missile boats. To regain some semblance of naval balance, she had four Brave class fast patrol boats retro-fitted with Nord SS-12

⁶⁴Harrigan, Anthony, "Security Interests in the Persian Gulf and Western Indian Ocean," Strategic Review, p. 18, Fall 1973.

wire-guided missiles. Thus, regardless of the effectiveness of such craft, they still present an aspect of naval power as outlined by Admiral Mahan in that there is a "fleet-in-being" effect which must be taken into account by potential adversaries.⁶⁵ This fleet may be small and even ineffectual, but until neutralized, it remains a factor in overall planning.

A potential role of patrol boat navies attractive to more extreme or radical elements involves guerrilla tactics at sea. A fast strike, without warning, and an immediate retreat is perfectly suited to patrol boat operations and has the added feature of seeming to escape the condemnation of world authorities. In particular, an attack by an unmarked craft on the Israeli-chartered tanker Coral Sea in the Straits of Bab el Mandeb in 1971 brought no reprisals, yet a seeming foolhardy attempt to capture the U.S. container ship Mayaguez resulted in immediate strikes against Cambodian installations by 7th Fleet units. Despite that extremely limited naval action in the Red Sea by fedayeen extremists, the Israeli Navy still had to consider this threat to their shipping in the area.⁶⁶ Similarly, 7th Fleet commanders were anxious to negate any further threat from the Cambodian

⁶⁵Mahan, op. cit., p. 242.

⁶⁶Bell, J. Bower, "Bab el Mandeb, Strategic Troublespot," Orbis, p. 987, Foreign Policy Research Institute, Winter 1973.

forces, especially in view of the original attacks upon U.S. warships in the Gulf of Tonkin in 1964 which precipitated in part United States' involvement in Southeast Asia.

Finally, the fast patrol craft may be seen to have seriously undermined the role of "showing the flag" or "Gunboat Diplomacy" as a means of influencing the actions of others through the noncombat use of naval vessels. Despite the fact that a Soviet Kynda missile cruiser may easily dispatch a patrol boat, it is in fact the perceived capabilities by the operators of that patrol craft that offers immunity to such coercion. The Soviets must therefore convince their intended victim of impending danger in order to effectively apply naval persuasion, yet it is the perhaps over-exaggerated sense of security offered by a few patrol boats that makes that act of coercion less credible. And herein lies possibly the greatest attribute of these weapons: their inherent quality of credible effectiveness combined with an impression of unobtrusiveness. The patrol boat offers at once instant reputation with humbled authority at a price none can afford not to pay. The future of naval strategies will in large part depend upon the extent and direction of employment of these craft, the success of which seems already assured.

BIBLIOGRAPHY

1. The Arms Trade With the Third World, Stockholm International Peace Research Institute, Humanities Press, 1971.
2. Baker, Arthur Davidson, III, "Small Combatants 1972-1973," U.S. Naval Institute Proceedings Naval Review, 1972 and 1973.
3. Bell, J. Bower, "Bab el Mandeb, Strategic Troublespot," Orbis, Foreign Policy Research Institute, Winter 1973.
4. Blackman, R.V.B., Jane's Fighting Ships, 1960-61 to 1975-76, McGraw-Hill, 1960 to 1975.
5. Blixt, Capt Melvin D., "Soviet Objectives in the Eastern Mediterranean," U.S. Naval War College Review, v. XXI, no. 7, March 1969.
6. Boehe, Rolf, "Modern Fast Patrol Boats," International Defense Review, v. 7, no. 6, Interavia, December 1974.
7. Brown, Neville, "The Eastern Mediterranean: A Fulcrum of World Power," Orbis, v. XVII, Foreign Policy Research Institute, Fall 1973.
8. Cable, James, Gunboat Diplomacy, Praeger Publishers, 1971.
9. Chief of Naval Operations, The Environment for the Projection of U.S. Military Power in the 1980-1990 Period, September 1973.
10. Cohen, Irvine J., "Israeli Missile Boats," National Defense, v. LIX, no. 328, American Defense Preparedness Association, January-February 1975.
11. Cottrell, Alvin J. and Joshua, Wynfred, "The United States-Soviet Strategic Balance in the Mediterranean," Brassey's Defense Yearbook, W. Clowes & Sons Limited London, 1974.

12. Duchene, Francois, "The Arms Trade and the Middle East," The Political Quarterly, The Political Quarterly Publishing Co., October-December 1973.
13. Dupuy, Col T.N., and Blanchard, Col Wendell, The Almanac of World Military Power, 2nd ed., R.R. Bodker Co., 1972.
14. Erell, RADM Shlomo, "Israeli Saar FPB's Pass Combat Test in Yom Kippur War," U.S. Naval Institute Proceedings, v. 100, no. 4/859, September 1974.
15. Hager, Wolfgang, "The Mediterranean: A European Mare Nostrum," Orbis, Foreign Policy Research Institute, Spring 1974.
16. Harrigan, Anthony, "Security Interests in the Persian Gulf and Western Indian Ocean," Strategic Review, Fall 1973.
17. Hurewitz, J.C., Middle East Politics: The Military Dimension, Thomson-Shore, Inc., 1974.
18. "Israel's New Missile-Armed Patrol Boats," International Defense Review, v. 6, no. 3, Interavia, June 1973.
19. Kaul, LCDR Ravi, "The Indo-Pakistani War and the Changing Balance of Power in the Indian Ocean," U.S. Naval Institute Proceedings, Naval Review 1973, 1973.
20. Keefe, Eugene K., and others, American University Area Handbook for Cyprus, U. S. Government Printing Office, 1971.
21. Laquer, Walter, The Struggle for the Middle East, The Macmillan Company, 1969.
22. Mahan, RADM Alfred Thayer, Mahan on Naval Warfare, ed. by Allen Westcott, Little Brown, and Co., 1918.
23. Margaritis, VADM Constantine, "A Strategic Analysis of the Eastern Mediterranean and the Black Sea," U.S. Naval Institute Proceedings, v. 99, no. 843, May 1973.

24. Miller, Martin J., Jr., "The Israeli Navy: 26 Years of Non-Peace," U.S. Naval Institute Proceedings, v. 101, no. 2, February 1975.
25. Nyrop, Richard F., and others, American University Area Handbook for Algeria, U.S. Government Printing Office, 1972.
26. Nyrop, Richard F., and others, American University Area Handbook for Libya, U.S. Government Printing Office, 1973.
27. Nyrop, Richard F., and others, American University Area Handbook for Syria, U.S. Government Printing Office, 1971.
28. Political Dictionary of the Middle East in the 20th Century, ed. by Yaacov Shimoni and Evyatar Levine, The Jerusalem Publishing House Ltd., 1974.
29. Reitzel, William A., "Seapower in the Mediterranean," U.S. Naval War College Review, v. XIX, no. 2, October 1966.
30. Roskill, Capt Stephen W., "A Strategic Analysis of the Mediterranean," U.S. Naval Institute Proceedings Naval Review, 1969.
31. Smith, Harvey H., and others, American University Area Handbook for the United Arab Republic (Egypt), U.S. Government Printing Office, October 1970.
32. Smith, Henry H., and others, American University Area Handbook for Lebanon, U. S. Government Printing Office, 1974.
33. Strategic Survey 1973, The International Institute for Strategic Studies, 1974.
34. The U.S.S.R. and the Middle East, ed. by Michael Confino and Shimon Shamir, Israel Universities Press, 1973.
35. Zartman, I.W., "The Mediterranean, Bridge or Barrier?" U.S. Naval Institute Proceedings, v. 93, February 1967.

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